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Market Operations in Fiscal 2019

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I. Introduction

During fiscal 2019 (April 1, 2019 to March 31, 2020), the Bank of Japan pursued powerful monetary easing under the framework of Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control.

Under the yield curve control, according to the guidelines for market operations decided at each Monetary Policy Meeting (MPM), the Bank applied a negative interest rate of minus 0.1 percent to the policy-rate balances in current accounts held by financial institutions at the Bank as the short-term policy interest rate. Regarding the long-term interest rate, the Bank purchased Japanese government bonds (JGBs) so that 10-year JGB yields would remain at around 0 percent. Based on the above, 10-year JGB yields remained at around 0 percent and the yield curve was formed in a manner consistent with the aforementioned guidelines throughout fiscal 2019.

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Aside from JGBs, the Bank purchased a wide range of assets including exchange-traded funds (ETFs), Japan real estate investment trusts (J-REITs), CP, and corporate bonds in accordance with the guidelines for purchasing assets likewise decided at each MPM.

From the beginning of 2020, global financial and capital markets became increasingly unstable, with growing uncertainties over the global economy due mainly to the spread of the novel coronavirus disease (COVID-19). In response to this, the Bank conducted market operations in a flexible manner including unscheduled purchases of JGBs, in order to ensure stability in financial markets toward the end of March. At the MPM held on March 16, the Bank decided to enhance monetary easing through (1) the further ample supply of funds by conducting various operations including purchases of JGBs and U.S. Dollar Funds-Supplying Operations, (2) measures to facilitate corporate financing including the introduction of a new operation, and (3) active purchases of ETFs and J-REITs. The Bank conducted market operations in accordance with the above decision thereafter.

This paper elaborates on the market operations conducted by the Bank during fiscal 2019 based on the conduct of the monetary policy described above. The rest of this paper is organized as follows. Chapter II provides an outline of the Bank's market operations. Chapter III presents an overview of the developments in financial markets such as Japanese money markets and bond markets. Chapter IV describes the conduct of each measure in market operations. Chapter V discusses changes in the frameworks related to market operations. Finally, Chapter VI presents the Bank's actions to enhance dialogue with market participants.

II. Outline of the Conduct of Market Operations by the Bank during Fiscal 2019

A. Guidelines for Market Operations and Guidelines for Asset Purchases

During fiscal 2019, the Bank continued with QQE with Yield Curve Control introduced at the MPM held on September 20 and 21, 2016, and pursued powerful monetary easing under the policy framework.

First of all, under this policy framework, the guideline for market operations pertaining to yield curve control stipulated that (1) "the Bank will apply a negative interest rate of minus 0.1 percent to the policy-rate balances in current accounts held by financial institutions at the Bank" as the short-term policy interest rate. Regarding the long-term interest rate, the guideline stipulated that (2) "the Bank will purchase JGBs so that 10-year JGB yields will remain at around 0 percent. While doing so, the yields may move upward and downward to some extent mainly depending on developments in economic activity and prices.[1] With regard to the amount of JGBs to be purchased, the Bank will conduct purchases in a flexible manner so that their amount outstanding will increase at an annual pace of about 80 trillion yen."

Next, the guidelines for asset purchases, excluding those for JGB purchases, stipulated that "the Bank will purchase ETFs and J-REITs so that their amounts outstanding will increase at annual paces of about 6 trillion yen and about 90 billion yen, respectively. With a view to lowering risk premia of asset prices in an appropriate manner, the Bank may increase or decrease the amount of purchases depending on market conditions," and that, "as for CP and corporate bonds, the Bank will maintain their amounts outstanding at about 2.2 trillion yen and about 3.2 trillion yen, respectively." Of these, at the MPM held on March 16, 2020, the Bank decided as part of the "Enhancement of Monetary Easing in Light of the Impact of the Outbreak of the Novel Coronavirus (COVID-19)" that it would (1) "actively purchase ETFs and J-REITs for the time being so that their amounts outstanding will increase at annual paces with upper limits of about 12 trillion yen and about 180 billion yen, respectively" and (2) "increase the upper limit to purchase CP and corporate bonds by 2 trillion yen in total and conduct purchases with the upper limit of their amounts outstanding of about 3.2 trillion yen and about 4.2 trillion yen, respectively."[2] The Bank decided to continue with these additional purchases until the end of

[1] In case of a rapid increase in the yields, the Bank will purchase JGBs promptly and appropriately.

[2] The Bank increased the maximum amounts of additional purchases to 15 trillion yen in total at the

September 2020.[3]

In addition, with respect to its inflation-overshooting commitment, it was stipulated that "the Bank will continue expanding the monetary base until the year-on-year rate of increase in the observed CPI (all items less fresh food) exceeds 2 percent and stays above the target in a stable manner."

Meanwhile, at the MPM held on April 24 and 25, 2019, the Bank clarified its forward guidance for policy rates[4] and decided "Measures Contributing to the Continuation of Powerful Monetary Easing" with a view to making clearer its policy stance to persistently continue with powerful monetary easing (see Chapter V.A). As for the forward guidance for policy rates, it was judged at the MPM held on October 30 and 31 that although there had been no further increase in the possibility that the momentum toward achieving the price stability target would be lost, it was necessary to continue to pay close attention to that possibility. With a view to clarifying this recognition, the Bank changed the wording of the guidance to the following: "As for the policy rates, the Bank expects short- and long-term interest rates to remain at their present or lower levels as long as it is necessary to pay close attention to the possibility that the momentum toward achieving the price stability target will be lost."

From late February 2020, global financial and capital markets became increasingly unstable due to the global spread of COVID-19. In light of this, on March 2, the Bank released a statement by the governor that indicated its commitment to strive to provide ample liquidity and ensure stability in financial markets through appropriate market operations and asset purchases.[5] In addition, on March 16, the Bank held its MPM earlier than originally scheduled, and decided to enhance monetary easing. The decision included measures such as the further ample supply of funds by conducting various operations including purchases of JGBs and the U.S. Dollar Funds-Supplying Operations, facilitation of corporate financing, and the aforementioned changes to the guidelines for asset purchases. These measures were to be taken with a view to doing its utmost to ensure smooth corporate financing and maintaining stability in financial markets, thereby preventing

MPM held on April 27, 2020.

[3] The Bank extended the period of these additional purchases to the end of March 2021 at the unscheduled MPM held on May 22, 2020.

[4] It stated, "As for policy rates, the Bank intends to maintain the current extremely low levels of short- and long-term interest rates for an extended period of time, at least through around spring 2020, taking into account uncertainties regarding economic activity and prices including developments in overseas economies and the effects of the scheduled consumption tax hike."

[5] See https://www.boj.or.jp/en/announcements/press/danwa/dan2003a.pdf for details.

firms' and households' sentiment from deteriorating.

B. Summary of Operations

Based on the above guidelines for market operations and asset purchases, the Bank conducted various market operations during fiscal 2019 as described below.

1. Supply of Yen Funds

With regard to outright purchases of JGBs, the Bank conducted purchases so that the yield curve would be formed in a manner consistent with its guidelines for market operations. The Bank flexibly adjusted the purchase size and issues to be purchased depending on market developments at the time. In addition, with a view to increasing the time periods in which the bond market's price discovery function could be fully realized, the Bank reduced the frequency of purchases per month, increased the flexibility with which it set its schedule of purchases, and excluded on-the-run issues within the super-long-term maturity zone from its purchases.

Specifically, amid the substantial decline in the long-term interest rate and further flattening of the yield curve from the summer through the fall of 2019, the Bank reduced its purchase sizes mainly in the long-term and super-long-term maturity zones so that an appropriate yield curve would be formed in a manner consistent with the guidelines for market operations. On the other hand, in March 2020, when global financial and capital markets became unstable due to the spread of COVID-19 and a rapid decline in liquidity was observed in bond markets, the Bank conducted purchases in a flexible manner. This included the Bank's purchases of JGBs that had not been announced in the Outline of Outright Purchases of Japanese Government Securities (JGSs) released at the end of February.

As for outright purchases of T-Bills, the Bank flexibly adjusted the purchase size per auction, depending on developments in yields on T-Bills, their supply and demand conditions, and other developments in other parts of the money markets. In particular, the Bank offered outright purchases of T-Bills once a week in principle and purchased 100 billion to 1 trillion yen of T-Bills per auction.

Outright purchases of CP and corporate bonds were carried out in line with the Bank's guideline for asset purchases. Albeit with some monthly fluctuations, the Bank purchased CP and corporate bonds to maintain their amounts outstanding at about 2.2 trillion yen and about 3.2 trillion yen, respectively. After the MPM held on March 16, 2020, the Bank increased the purchase size per auction as part of its measures to facilitate corporate financing.

Outright purchases of ETFs and J-REITs were also carried out in line with the guidelines for asset purchases mentioned above. The Bank conducted its purchases more actively by raising the purchase amount per auction in an incremental manner from March 2020 toward the end of fiscal 2019.

With regard to the Fixed-Rate Funds-Supplying Operations against Pooled Collateral, the Bank offered 2-week term operations on a weekly basis up through the beginning of November 2019 and on a bi-weekly basis from the middle of November onward, in principle, mainly taking into account the needs of the counterparties. When there was growing demand for funds in money markets, the Bank flexibly offered additional 1-day, 1-week, and 2-week term operations.

Moreover, in March 2020, the Bank conducted purchases of JGSs with repurchase agreements for the first time in four years. The operation was conducted with a view to providing money markets with ample liquidity in a timely manner and maintaining the stability of financial markets.

Offers were made once every three months for both the Growth-Supporting Funding Facility and the Stimulating Bank Lending Facility. The Funds-Supplying Operation to Support Financial Institutions in Disaster Areas and the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas of the 2016 Kumamoto Earthquake were conducted once a month.

In addition, on March 24, 2020, the Bank made the first round of offers for the Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19). The introduction of these operations was decided at the MPM on March 16. Immediately after the decision, the Bank selected the counterparties for the operations.

2. Supply of U.S. Dollar Funds

The Bank offered 1-week U.S. Dollar Funds-Supplying Operations based on the U.S. dollar-yen swap arrangements with the Federal Reserve Bank of New York (NY Fed) principally on a weekly basis through the middle of March 2020. Amid the subsequent growing uncertainties over future prospects for the global economy due to the outbreak of COVID-19, the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, the Federal Reserve System (Fed), and the Swiss National Bank announced the "Coordinated Central Bank Action to Enhance the Provision of Global U.S. Dollar Liquidity" on March 15 (Eastern Standard Time). This announcement was made with a view to doing their utmost to ensure conditions regarding U.S. dollar funding. With respect to the supply of U.S. dollar funds, the six central banks agreed to lower the lending rate by 0.25 percent so that the new rate would be the U.S. dollar overnight index swap (OIS) rate plus 0.25 percent. They also agreed to offer operations with a 3-month maturity on a weekly basis in addition to the 1-week maturity operation which had been already offered. Moreover, on March 20, the "Coordinated Central Bank Action to Further Enhance the Provision of U.S. Dollar Liquidity" was announced, in which it was decided to increase the frequency of 1-week maturity operations from weekly to daily. Following these decisions, 3-month U.S. Dollar Funds-Supplying Operations were conducted once a week starting from March 17, and the operations with a 1-week term were conducted every business day from March 23. These operations were actively utilized by counterparties.

3. Supply of JGSs

During fiscal 2019, the Securities Lending Facility (SLF) was offered on virtually all business days on request by the counterparties for market operations. Overall, conditions remained calm through February 2020, as evidenced by the number of issues and their amount successfully bid remaining at low levels. However, from the beginning of March, the number of issues and their amount successfully bid both increased rapidly as supply and demand conditions of JGBs tightened amid the decline in market functioning, which lasted through to the end of the fiscal year mainly due to the outbreak of COVID-19.

Taking into account the abovementioned decline in financial market functioning and the increased demand for JGSs for the purpose of providing collateral, sales of JGSs with repurchase agreements intended to provide the market with JGSs were carried out for the first time in three years.

Moreover, Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations was offered with great frequency, and the total utilized amount increased significantly from March 2020. These operations are aimed at ensuring that the necessary collateral can be obtained smoothly when counterparties make use of the U.S. Dollar Funds-Supplying Operations. Starting in the middle of March 2020, the U.S. Dollar Funds-Supplying Operations began to be used actively, and demand for this operation was heightened as well.

C. The Bank's Balance Sheet

Under the conduct of the aforementioned market operations, the Bank's balance sheet and the monetary base continued to expand (Chart 2-1).

The Bank's balance sheet stood at 604.5 trillion yen at the end of March 2020, an increase of 47.5 trillion yen from a year earlier. Meanwhile, the monetary base amounted to 509.8 trillion yen at the end of March 2020, an increase of 3.5 trillion yen from a year earlier (See the box "Financial Markets and the Conduct of Market Operations in Light of the Outbreak of COVID-19" for how the market operations in light of spread of COVID-19 affected the Bank's balance sheet).

On the asset side of the balance sheet, a wide range of assets such as JGBs, CP, corporate bonds, ETFs, and J-REITs increased due to the provision of ample liquidity under QQE with Yield Curve Control. Moreover, reflecting the increase in the use of the U.S. Dollar Funds-Supplying Operations, foreign currency assets increased significantly by 19.2 trillion yen from the year-earlier level to 26.0 trillion yen.

On the liability side of the balance sheet, banknotes increased by 2.1 trillion yen from a year earlier to 109.6 trillion yen and current account balances at the Bank increased by 1.4 trillion yen from a year earlier to 395.3 trillion yen. Meanwhile, as the Bank offered sales of JGSs with repurchase agreements to supply JGSs including Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations, payables under repurchase agreements increased substantially by 23.9 trillion yen from the year-earlier level to 24.1 trillion yen. Other deposits, including deposits from foreign central banks and others, also increased significantly by 24.3 trillion yen from the year-earlier level to 51.8 trillion yen.

Chart 2-1: The Bank's Balance Sheet

trillion yen

	End-Mar. 2015	End-Mar. 2016	End-Mar. 2017	End-Mar. 2018	End-Mar. 2019	End-Mar. 2020	Year-on-year
JGBs	220.1	301.9	377.1	426.6	459.6	473.5	+14.0
CP	2.0	2.0	2.0	2.1	2.0	2.6	+0.5
Corporate bonds	3.2	3.2	3.2	3.2	3.2	3.2	+0.0
ETFs	4.5	7.6	12.9	18.9	24.8	29.7	+4.9
J-REITs	0.21	0.29	0.38	0.48	0.52	0.58	+0.1
Loan Support Program	27.0	30.1	43.4	45.6	46.1	49.2	+3.1
Funds-Supplying Operation to Support Financial Institutions in Disaster Areas, etc.	0.3	0.3	0.5	0.5	0.7	0.5	-0.1
Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19)	-	-	-	-	-	3.4	+3.4
Outright purchases of T-Bills	37.9	36.9	32.6	18.8	7.9	10.2	+2.3
Funds-Supplying Operations against Pooled Collateral	6.8	3.7	0.7	0.4	0.7	1.2	+0.6
Foreign currency assets	7.1	6.7	6.6	6.4	6.7	26.0	+19.2
Total assets (including others)	323.6	405.6	490.1	528.3	557.0	604.5	+47.5
Banknotes	89.7	95.6	99.8	104.0	107.6	109.6	+2.1
Current account balances	201.6	275.4	342.8	378.2	393.9	395.3	+1.4
Other deposits	4.5	7.5	13.6	21.4	27.5	51.8	+24.3
Payables under repurchase agreements	17.6	0.2	3.4	0.3	0.2	24.1	+23.9
Total liabilities and net assets (including others)	323.6	405.6	490.1	528.3	557.0	604.5	+47.5

Monetary base	295.9	375.7	447.3	487.0	506.3	509.8	+3.5

Notes: 1. "Funds-Supplying Operation to Support Financial Institutions in Disaster Areas, etc." is the sum of funds-supplying operations to support financial institutions in disaster areas and funds-supplying operations to support financial institutions in disaster areas of the 2016 Kumamoto earthquake.
2. "Outright purchases of T-bills" does not reflect changes in the amount of T-bills induced by, for example, the Bank's transactions with the government.
3. "Foreign currency assets" is the sum of foreign currency-denominated assets held by the Bank, foreign currency loans by U.S. Dollar Funds-Supplying Operations against pooled collateral, and other assets.
4. "Other deposits" represents deposits such as those held by foreign central banks.
5. "Payables under repurchase agreements" includes the Securities Lending Facility, sales of JGSs with repurchase agreements, and Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations.

D. Developments in Exogenous Sources of Changes in Current Account Balances at the Bank

Financial institutions' current account balances at the Bank change along with market operations as well as receipts and payments of banknotes and treasury funds between financial institutions and the Bank or the government. Changes in the current account balances at the Bank resulting from factors other than market operations are called "exogenous sources of changes in current account balances at the Bank." Exogenous sources of changes in the current account balances at the Bank are categorized into (1) "changes in banknotes" resulting from exchanges of banknotes for deposits in the current accounts and (2) "changes in treasury funds and others" resulting from exchanges of funds between the current accounts and government deposits.

During fiscal 2019, exogenous sources of changes in current account balances at the Bank, particularly changes in treasury funds and others, caused current account balances to decrease by 75.9 trillion yen. The current account balances at the Bank exhibited a smaller decrease compared with the 99.2 trillion yen in fiscal 2018.

1. Changes in Banknotes

The outstanding balance of banknotes continued on an uptrend during fiscal 2019, and stood at 112.7 trillion yen (an increase of 2.2 percent year-on-year) at the end of December 2019 and 109.6 trillion yen (an increase of 1.9 percent year-on-year) at the end of March 2020 (Chart 2-2). Reflecting this increase in banknote issuance, changes in banknotes continued to be a source of decrease in current account balances at the Bank in fiscal 2019, although the amount of net issuance was smaller than that of fiscal 2018, decreasing from 3.6 trillion yen to 2.1 trillion yen.

The cumulative changes in banknotes from the start of fiscal 2019 indicated that seasonal fluctuations in the amounts of issuance and redemption remained more or less unchanged from fiscal 2018. The amount of net issuance decreased due to the slowdown in the pace of issuance which was also observed in fiscal 2018. In 2019, demand for banknotes increased during the 10-day holiday period from the end of April through early May, which was longer than usual. Consequently, the amount of net issuance significantly expanded, temporarily surpassing that of the previous fiscal year (Chart 2-3).

Chart 2-2: Outstanding Balance of Banknotes Issued

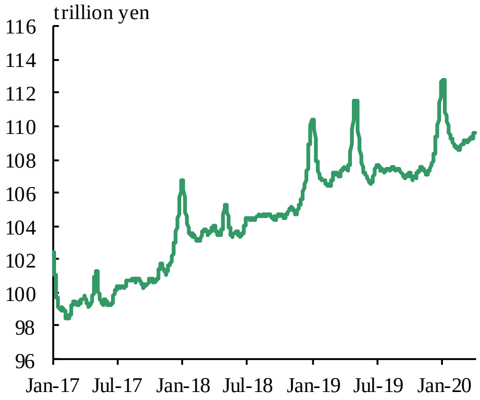
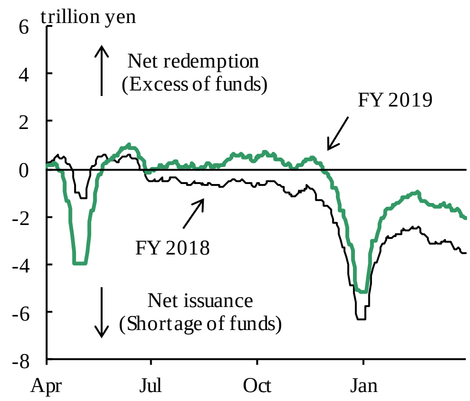


Chart 2-3: Cumulative Changes in Banknotes from the Start of the Fiscal Year



2. Changes in Treasury Funds and Others

In fiscal 2019, changes in treasury funds and others registered net receipts of 73.8 trillion yen (decrease in current account balances at the Bank),[6] a decrease from the net receipts of 95.7 trillion yen in fiscal 2018 (Chart 2-4). After adjusting for the increment by which the repayment amount to financial institutions decreased as a result of the Bank having purchased JGBs and T-Bills as part of its market operations (hereinafter referred to as the "repayment adjustment"[7]), net receipts amounted to 3.1 trillion yen. Compared with fiscal 2018 when this was 11.6 trillion yen after the

[6] The net amount of JGBs and T-Bills issued (or redeemed) is registered as changes in treasury funds and others, provided that the Bank does not engage in market operations. If the Bank purchases JGBs and T-Bills from financial institutions and holds them to maturity, these positions are not netted out. Specifically, the Bank records net receipts for changes in treasury funds and others (decrease in current account balances at the Bank) when JGBs and T-Bills are issued by the government. The Bank's purchases of JGBs and T-Bills are sources of increase in current account balances at the Bank, while the current account balances do not see a change upon redemption of the securities. As a result, changes in treasury funds and others register substantial net receipts (decrease in current account balances at the Bank) due to the Bank's market operations, although receipts and payments for changes in treasury funds and others are assumed to be largely commensurate with one another.

[7] With "repayment adjustments," regarding JGBs and T-Bills redeemed from the government to the Bank, adjustments are made to treat these as if the Bank sold them to financial institutions just before redemption and financial institutions received the redemptions from the government. For this reason, after repayment adjustments are carried out, there are changes in the amount of fluctuation for JGBs (with a residual maturity of more than 1 year) and T-Bills from among changes in treasury funds and others, as well as in purchases of JGBs and T-Bills as part of market operations (Chart 2-6).

repayment adjustment, these net receipts increased the current account balances at the Bank by 8.5 trillion yen (Charts 2-5 and 2-6).

As for the factors behind this increase, the amount of net issuance of JGBs declined. In fiscal 2019, redemption of JGBs increased, especially that of the 10-year JGBs issued after the global financial crisis, while the issuance of JGBs fell compared with in fiscal 2018. In addition, factors such as the increase in net payments of fiscal payments and revenues, due in part to the countermeasures for the October 2019 consumption tax hike, also contributed to a decline in net receipts for changes in treasury funds and others.[8]

Chart 2-4: Cumulative Changes in Treasury Funds and Others from the Start of the Fiscal Year

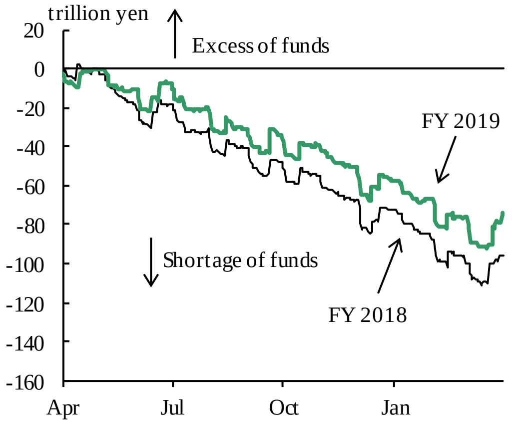
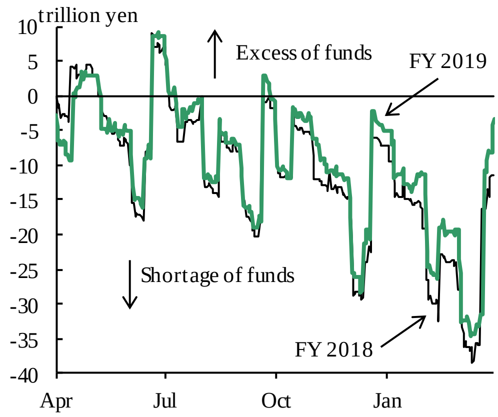


Chart 2-5: Cumulative Changes in Treasury Funds and Others from the Start of the Fiscal Year (After Repayment Adjustments)



[8] The various countermeasures for the outbreak of COVID-19 (such as deferring the payment deadline for taxes and paying out funds for Fiscal Investment and Loan Program) induced limited impact on changes in treasury funds and others in fiscal 2019.

Chart 2-6: Sources of Changes in Current Account Balances at the Bank

trillion yen

	Before adjustment			After adjustment		
	FY 2018	FY 2019	Year-on-year	FY 2018	FY 2019	Year-on-year
Banknotes	-3.6	-2.1	1.5	-3.6	-2.1	1.5
Treasury funds and others	-95.7	-73.8	21.9	-11.6	-3.1	8.5
Net fiscal payments	16.5	22.0	5.5	16.5	22.0	5.5
JGBs (more than 1 year)	-79.4	-73.3	6.0	-26.5	-18.4	8.1
T-Bills	-27.9	-17.0	10.9	3.3	-1.2	-4.6
Foreign exchange	0.3	-0.9	-1.2	0.3	-0.9	-1.2
Others	-5.3	-4.6	0.7	-5.3	-4.6	0.7
Surplus/shortage of funds	-99.2	-75.9	23.4	-15.2	-5.2	10.0
BOJ loans and market operations	114.9	77.2	-37.6	30.8	6.6	-24.3
Outright purchases of JGBs	87.5	70.7	-16.8	34.7	15.7	-18.9
Outright purchases of T-Bills	20.3	18.1	-2.2	-10.9	2.3	13.2
Securities lending to provide JGSs as collateral for the U.S. dollar funds-supplying operations	0.0	-19.2	-19.2	0.0	-19.2	-19.2
Loan Support Program	0.5	3.1	2.6	0.5	3.1	2.6
Other loans and market operations	6.5	4.7	-1.9	6.5	4.7	-1.9
Net change in current account balances	15.6	1.4	-14.3	15.6	1.4	-14.3

Notes: 1. Negative figures represent a net increase in banknotes, net receipts of treasury funds and others, or absorption of funds through market operations.
2. Figures after repayment adjustments do not take account of amortization, accumulation, and other factors; therefore, they diverge from the year-on-year figures on the balance sheet.
3. The shaded areas indicate increase or decrease of figures after repayment adjustments.

Among the factors that affect the current account balances at the Bank are developments of yen-denominated deposits received by the Bank from foreign central banks and international institutions. These are included in "Others" of "Treasury funds and others." The balance of deposits received from overseas monetary authorities mainly for the purpose of yen-denominated foreign reserves has continued to increase in recent years, serving as a decreasing factor for the current account balances at the Bank. This balance tends to fluctuate significantly according to the asset investment policies of the individual depositors, contributing to the daily fluctuations seen in the current account balances at the Bank.

Box: Financial Markets and the Conduct of Market Operations in Light of the Spread of COVID-19

This box provides an overview of the developments in financial markets and the Bank's conduct of market operations in light of and in response to the spread of COVID-19.

Looking at the financial markets from February 2020, investors' risk appetite had deteriorated sharply at home and abroad due to the global spread of COVID-19. U.S. stock prices plunged in late February, despite having been strong in the middle of February, marking record highs. Japanese stock prices also fell by as much as approximately 30 percent from the year-to-date high marked on February 6. As a risk-averse attitude spread, Japanese long-term interest rates, which had been within the range of about minus 0.05 to 0.00 percent since the beginning of 2020, declined to around minus 0.20 percent over a 2-week period (Box Chart 1).

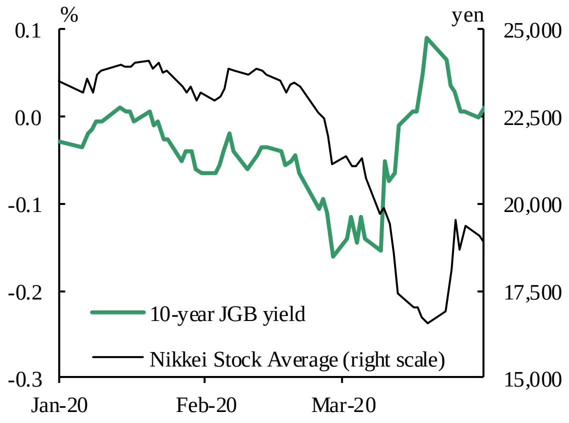
From the beginning of March, market liquidity and functioning declined further as COVID-19 continued to spread globally. Many financial institutions faced tighter operational constraints, such as those resulting from shifting to working from home or splitting operations across alternative business bases. This has further accelerated a deterioration in market functioning.

In the Japanese bond market, long-term interest rates turned to a substantial increase from a preceding downward trend. This mainly reflected moves by foreign investors to reduce their positions and a growing demand among Japanese investors for sales with an intention of realizing profit following a decline in stock prices. The rise in long-term interest rates was also due to a decrease in the number of bond buyers. Among both investors and securities companies, the capacity to take on additional risk decreased partly due to an increase in volatility, with the fiscal year coming toward the end. This gave rise to a vicious cycle by further increasing volatility in both bond futures and cash bonds, which then prompted a decline in market liquidity (Box Charts 2 and 3). Thereafter, long-term interest rates returned to close to 0 percent due to the enhanced monetary easing, as well as additional purchases of JGBs and increased amounts thereof, but the depressed liquidity in the bond market remained low even after the fiscal year-end.

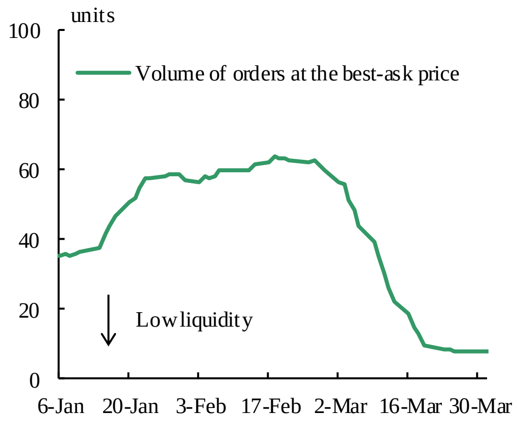
In the FX swap market, the global demand for U.S. dollar cash grew rapidly, as investors increased their preference for safe assets and as demand for on-hand liquidity increased among, for example, overseas firms that had been affected by the spread of COVID-19 in the United States and Europe. Market liquidity declined and U.S. dollar funding premiums have spiked. Thereafter, pressures in the global U.S. dollar funding markets eased and dollar funding premiums narrowed as the U.S. Dollar Funds-Supplying Operations were enhanced and actively utilized.

Furthermore, the repo market saw a temporary significant decline in the general collateral (GC) repo rate (Box Chart 4). This resulted from a strong awareness of a shortage of JGBs in the market while liquidity declined in the bond market and a limited number of market participants supplied JGBs into the market, due to, for example, a rising demand for JGBs as collateral and the aforementioned operational constraints.

Box Chart 1: Developments in Stock Prices and Long-Term Interest Rates

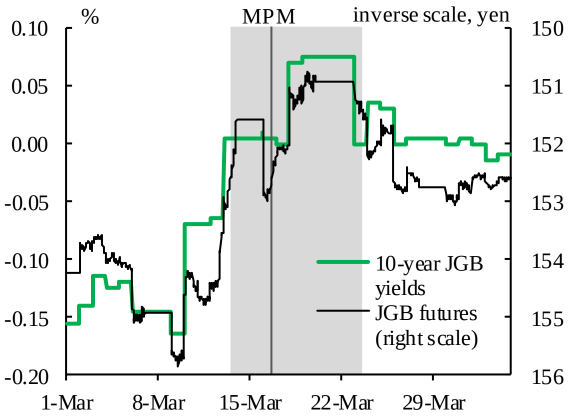


Box Chart 2: Liquidity in the JGB Futures Market



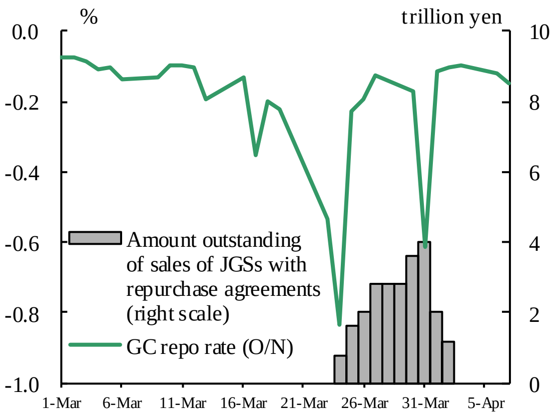
Note: Figures are calculated by taking the median of the volume of orders at the best-ask price with a 1-minute frequency. 10-day backward moving averages.

Box Chart 3: Developments in JGB Futures and Cash JGBs



Note: Shaded area indicates a period during which the Bank additionally conducted unscheduled outright purchases of JGBs that had not been announced in the "Outline of Outright Purchases of Japanese Government Securities" ("Outline") published at the end of the previous month.

Box Chart 4: GC Repo Rate and Sales of JGSs with Repurchase Agreements



Given these developments in financial markets, on March 2, the Bank released a statement by the governor to indicate its commitment to continue striving to provide ample liquidity and ensure stability in financial markets. On March 16, the Bank held its Monetary Policy Meeting earlier than originally scheduled, and decided to enhance monetary easing. Based on the above, the Bank conducted various market operations (Box Chart 5). Specifically, for (1) supply of yen funds, further ample liquidity was provided through operations, including active purchases of JGBs. For (2) supply of U.S. dollar funds, more ample liquidity was provided by, for example, starting 3-month funds-supplying operations and increasing the frequency of 1-week funds-supplying operations from weekly to daily. In addition, for (3) supply of JGSs, efforts were made to ensure stability in financial markets by, for example, relaxing the conditions for the Securities Lending Facility and conducting sales with repurchase agreements to supply JGSs. These were carried out with a view to easing excessive tightening in supply and demand of JGSs in the repo market. In addition, Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations was utilized at a scale of more than 18 trillion yen as of the end of fiscal 2019. This contributed to stabilizing financial markets by supplying financial institutions with JGSs, as well as supplying U.S. dollar funds through its use (for details, see Chapter IV. "Conduct of Individual Measures in Market Operations").

Box Chart 5: Supply of Funds and JGSs from mid-March 2020

1. Yen Funds Supply — 2. U.S. Dollar Funds Supply — 3. Supply of JGSs

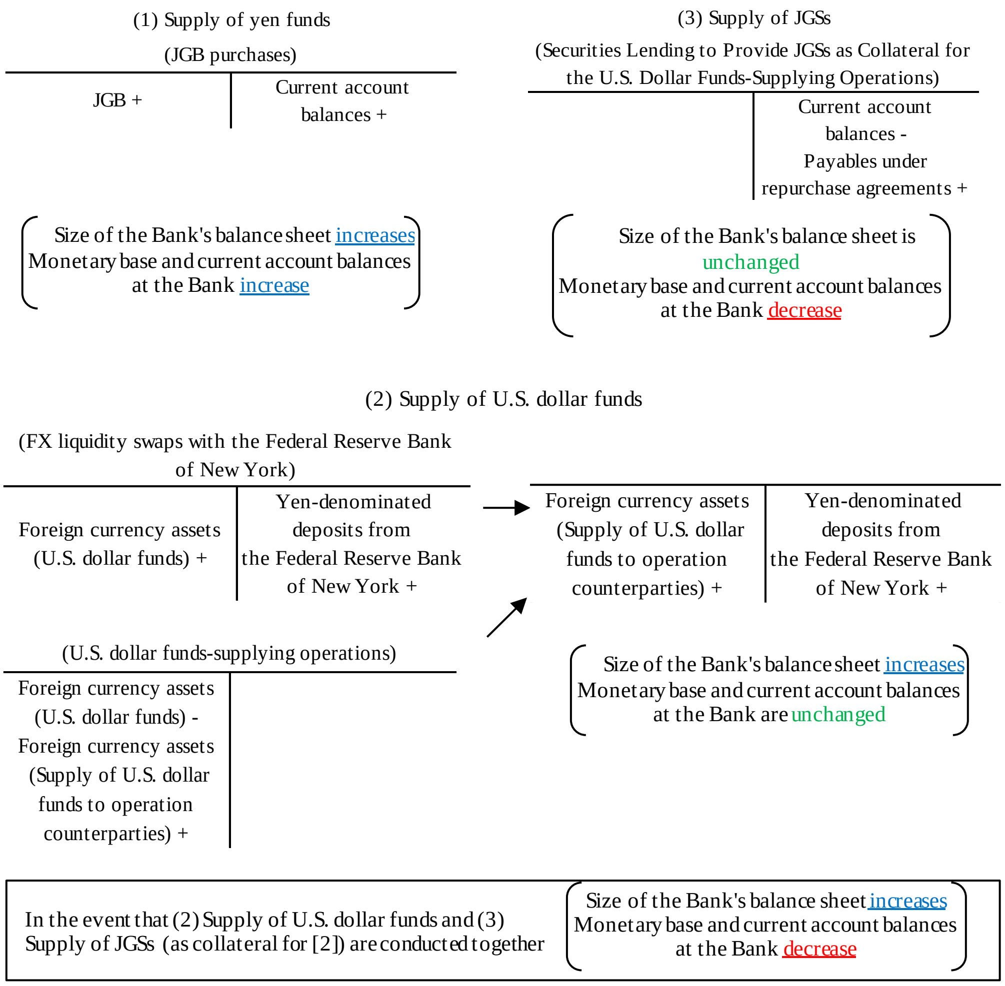
100 million yen, million dollars

	Outright purchases of JGBs	Outright purchases of T-Bills	Purchases of JGSs under repurchase agreements	Funds-supplying operations against pooled collateral	Special funds-supplying operations to facilitate corporate financing regarding the novel coronavirus (COVID-19)	Outright purchases of CP/ outright purchases of corporate bonds	Outright purchases of ETFs	Outright purchases of J-REITs	U.S. dollar funds-supplying operations against pooled collateral	Sales of JGSs under repurchase agreements	Securities lending as a secondary source of JGSs	Securities lending to provide JGSs as collateral for the U.S. dollar funds-supplying operations
13-Mar	2,000		5,000 <5>	15,000 <8,840>			1,002 (-)	12 (-)			2,599	
16-Mar								15 (+ 3)			1,208	
17-Mar	2,000						1,204 (+ 202)	20 (+ 5)	2,053 *30,272		7,308	2,409 *9,333
18-Mar	11,600					CP 5,000 (+ 1,000)		20 (-)			2,694	
19-Mar	13,000			40,000 <1,500>			2,004 (+ 800)	40 (+ 20)			3,521	
23-Mar	8,000 1,500	2,500				SB 2,000 (+ 1,000)	2,004 (-)	40 (-)	34,850	8,000	18,272	42,559
24-Mar					Unlimited <33,968>				15,465 *73,805	8,000	22,211	18,398 *78,283
25-Mar									4,950	24,000	5,437	2,678
26-Mar						CP 5,500 (+ 500)	2,004 (-)		2,265	8,000	3,253	1,396
27-Mar	11,100			20,000 <10,770>				40 (-)	13,100	8,000	1,547	15,437
30-Mar							2,004 (-)	40 (-)	24,100		1,816	21,280
31-Mar		2,500						40 (-)	9,285 *29,724		8,383	10,798 *28,876

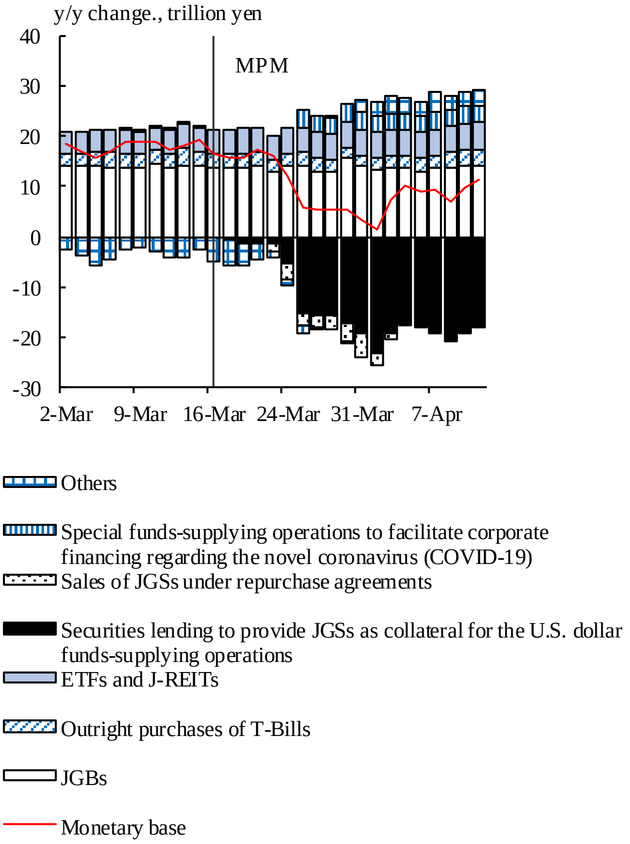
Notes: 1. Outright purchases of JGBs, outright purchases of T-Bills, purchases of JGSs under repurchase agreements, funds-supplying operations against pooled collateral, outright purchases of CP, outright purchases of corporate bonds are amounts offered. Others are actual purchase amounts or amounts of successful bids.
2. Figures in the shaded areas indicate purchase amounts in unscheduled operations.
3. Outright purchases of ETFs do not include outright purchases of ETFs to support firms proactively investing in physical and human capital.
4. Figures in angular brackets represent successful bids.
5. Figures in brackets represent the changes from the previous purchases.
6. Figures in the column for U.S. Dollar Funds-Supplying Operations against Pooled Collateral are for one week (unmarked) and three months (marked with an asterisk [*]).
7. "SB" in the column for outright purchases of CP/outright purchases of corporate bonds indicates outright purchases of corporate bonds.

Lastly, the impact of the aforementioned conduct of market operations on the monetary base and the Bank's balance sheet is as follows (Box Chart 6). First, (1) the supply of yen funds contributed to boosting the monetary base by increasing the current account balances at the Bank. In fact, the breakdown of year-on-year changes in the monetary base indicates that a steady increase in the monetary base was induced by providing funds through purchasing assets such as JGBs (Box Chart 7). Conversely, (3) the supply of JGSs including Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations provided counterparties with JGSs in exchange for current account balances at the Bank. Therefore, while the impact on the size of the Bank's balance sheet (total assets) was neutral, it contributed to decreasing the monetary base by reducing the current account balances at the Bank. In addition, with (2) the supply of U.S. dollar funds, the Bank provides counterparties with U.S. dollar funds that it obtains under the FX liquidity swap arrangement with the NY Fed. As a result, while foreign currency assets (supply of U.S. dollar funds to counterparties) rise on the asset side, yen deposits from the NY Fed increase on the liability side. This increase expands the size of the Bank's balance sheet, while not affecting the size of the monetary base. Overall, the Bank's balance sheet grew significantly from the middle of March in comparison with the growth rate of the monetary base (Box Chart 8).

Box Chart 6: Impact of Market Operations on the Bank's Balance Sheet

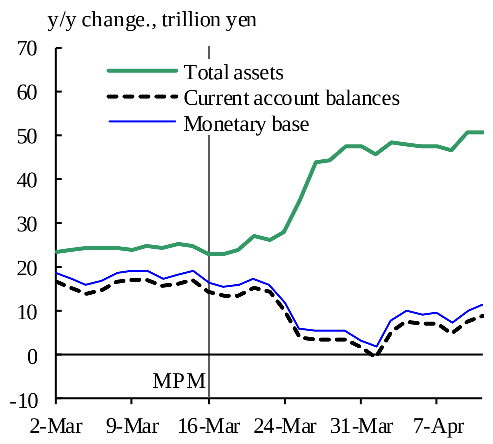


Box Chart 7: Breakdown of Year-On-Year Changes in the Monetary Base



Note: Based on business days.

Box Chart 8: Year-On-Year Changes in the Bank's Balance Sheet and Monetary Base



Note: Based on business days.

III. Developments in Domestic Money Markets and Bond Markets

A. Uncollateralized Call Market

During fiscal 2019, the call rate remained in the range of about minus 0.07 to about minus 0.01 percent (Chart 3-1). In the latter half of the fiscal year, especially in the November 2019 and the February 2020 reserve maintenance periods, certain sectors became more active in cash borrowing. This drove up the call rate especially toward the end of the reserve maintenance periods and the call rate occasionally surpassed minus 0.01 percent.

On the cash borrowing side, an increasing number of financial institutions were engaged in active borrowing in the call market, particularly in the latter half of the fiscal year. Financing capacity[9] of regional banks I and II (hereinafter referred to as the "regional banks") expanded, as the upper bound on their macro add-on balances was raised in a phased manner mainly due to the increased use of the Loan Support Program. The narrowing trend in the loan-deposit gap also contributed to increasing their financing capacity. Meanwhile, as part of moves to seek profit opportunities, regional banks expanded arbitrage trading. They obtained funds at a negative interest rate in the call market and kept these within their macro add-on balances to which a 0 percent interest rate is applied (Charts 3-2 and 3-3). When the call rate rose within negative territory, some investment trusts shifted their fund management tool for surplus trust funds from money trusts to call transactions. Consequently, some trust banks faced a decline in their inflow of funds via money trusts from investment trusts, making them more active in borrowing cash in the call market.

On the cash lending side, investment trusts, who are the major suppliers of funds in the call market, raised their preferred level of rates, taking into account the aforementioned changes on the cash borrowing side. Also, some city banks engaged in arbitrage trading that took advantage of the difference between the GC repo rates and call rates when the call rate rose within negative territory. Those banks obtained funds at a lower rate in the GC repo market where collateralized transactions take place, and invested the funds in the uncollateralized call market.

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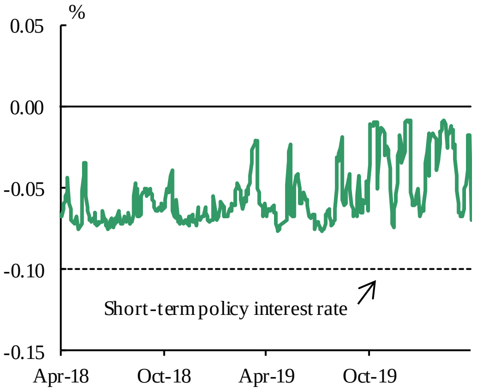
[9] The definition of financing capacity specifies that it is "calculated by deducting the balances of current accounts held by regional banks I and II at the Bank before trade in the uncollateralized call market from the upper bound on their basic balances and macro add-on balances." For details, see Box 3 in Market Operations in Fiscal 2017.

During fiscal 2019, the amount outstanding in the uncollateralized call market remained more or less in the range of about 7-10 trillion yen. The amount increased from the level seen the previous fiscal year, which was about 6-9 trillion yen. In February 2020, it reached the highest amount since the introduction of a negative interest rate policy (Chart 3-4). Financial institutions' active arbitrage trading that took advantage of the three-tier system of their current accounts at the Bank, including the aforementioned moves by regional banks, contributed to this increase (Chart 3-5).

Chart 3-1: Uncollateralized Overnight Call Rate



Note: Weighted average.

Chart 3-2: Illustration of Financing Capacity

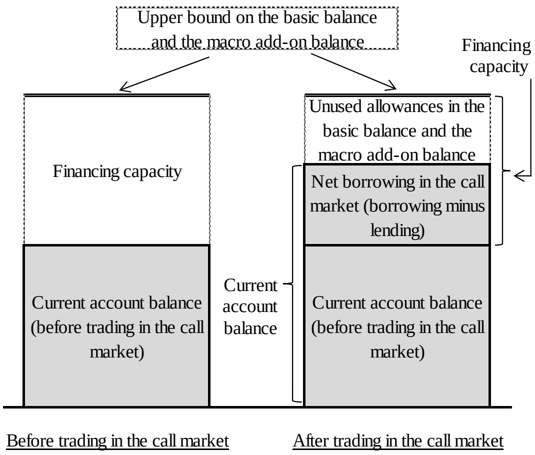


Chart 3-3: Financing Capacity of Regional Banks I and II

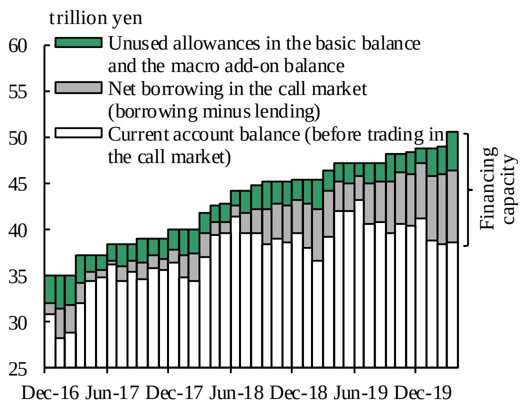
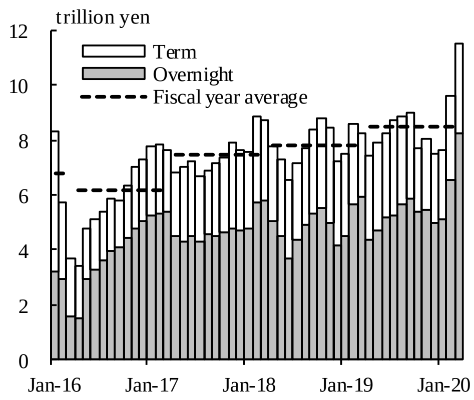


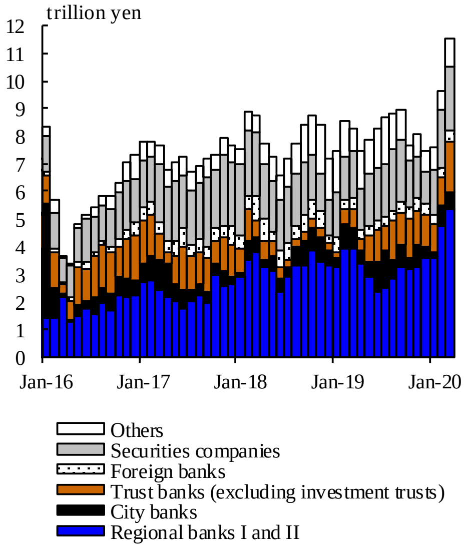
Chart 3-4: Amounts Outstanding in the Uncollateralized Call Market



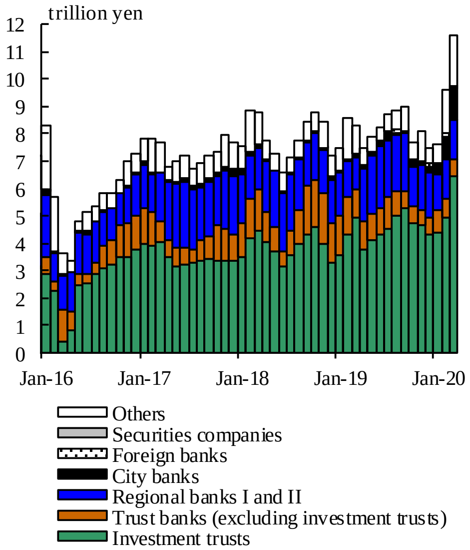
Note: Monthly average.

Chart 3-5: Amounts Outstanding in the Uncollateralized Call Market by Sector

(Cash Borrowing Side)



(Cash Lending Side)



Note: Monthly average.

B. Repo Market

The GC repo rate was in the range of around minus 0.10 percent to minus 0.05 percent in most of fiscal 2019, slightly exceeding the short-term policy interest rate (of minus 0.1 percent). This range was somewhat higher than that of fiscal 2018 (Chart 3-6). Financial institutions actively engaged in arbitrage trading that took advantage of the three-tier system of their current accounts at the Bank, while securities companies financed their securities purchases. Meanwhile, during the 10-day holiday period from the end of April through early May and when the end of the fiscal year drew near, the GC repo rate temporarily fell significantly in negative territory.

The rise in the GC repo rate relative to the previous fiscal year can be attributed to the decrease in the funds-supplying capacity of some financial institutions which used to provide funds actively in the repo market. Their funds-supplying capacity decreased mainly due to the increase in use of the Loan Support Program, which pushed up the upper bound on their macro add-on balances. As a result, the GC repo rate rose somewhat significantly, exceeding minus 0.10 percent, when the demand for cash borrowing from city banks and securities companies increased. In particular, the rate temporarily rose close to 0 percent in the middle of December 2019. On the other hand, an expansion in the number of cash lending entities was observed when the GC repo rate increased. Market participants that had not been active in cash lending in the repo market due to their administrative costs began lending at that time.

From the middle of March 2020, the GC repo rate decreased further within negative territory as supply and demand conditions for the JGBs to collateralize repo transactions were tightened due to the decline in market functioning of the repo market.[10] The tightening was mainly caused by (1) an increase in demand among domestic investors for collateral that extended beyond the end of the fiscal year, (2) a decrease in the number of bond suppliers brought about by administrative constraints resulting from shifting to working from home and splitting operations across alternative business bases, and (3) unscheduled purchases of JGBs by the Bank.

Toward the end of the fiscal year, the GC repo rate recovered to the range of minus 0.1 to minus 0.3 percent with the exception of the minus 0.615 percent observed on March 31, when transactions were scarce at the end of the fiscal year. The Bank's active supply of JGBs in the

[10] The GC repo rate marked the historic low on March 24 for the overnight rate since the compilation of the statistics for the GC repo rate began in 2007, at minus 0.833 percent.

market through its operations, which will be elaborated on further in a later section, and a peak-out of demand for collateral contributed to the recovery in the GC repo rate.

The special collateral (SC) repo rate remained generally stable in fiscal 2019. There were only limited cases where upward pressure on JGB yields was observed. Under such circumstances, the demand for covering the short position of cash JGBs was limited. The relaxation of the terms and conditions for the Securities Lending Facility implemented in June 2019, which will be elaborated on further in a later section, also contributed to making the SC repo rates stable. Looking at developments in detail, the supply and demand conditions of some issues tightened temporarily, leading to a drop in their SC repo rates (increase in their borrowing costs). Those issues included the on-the-run issues before reopening issuance auctions for which the need of securities companies to borrow is likely to increase, and off-the-run issues of which the amounts outstanding in the market were particularly low. Nonetheless, as market participants had been taking into account the minimum fee rate for the Securities Lending Facility, the decline in the SC repo rate remained limited in many issues relative to that of the GC repo rate (Chart 3-7).[11] The only exception was in March 2020, when the SC repo rate also declined significantly under the aforementioned decline in market functioning in the repo market.

The amount outstanding in the repo market increased significantly, reflecting a wider range of financial institutions actively engaging in the aforementioned arbitrage trading with the GC repo rate mostly staying above the level of the short-term policy interest rate (i.e. minus 0.1 percent) (Chart 3-8).

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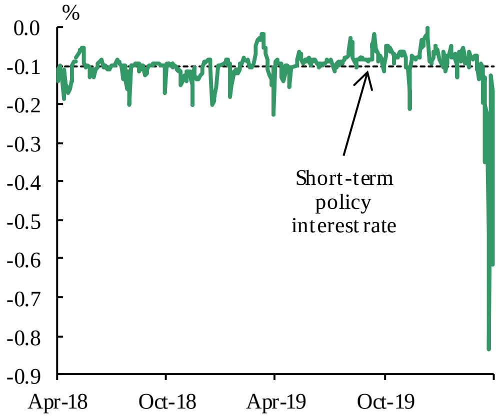
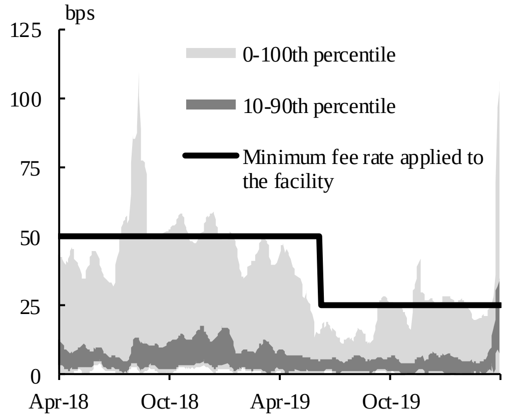
[11] In November 2019, the SC repo rate for on-the-run 20-year JGBs (issue number 170) temporarily fell to a significant extent, partly due to demand for short covering. Market participants commented that the surge in the borrowing costs had been partly attributable to the fact that the said JGBs were excluded from issues eligible for the Bank's purchases at that point and that it was expected that market participants would not be able to obtain the said JGBs through the Securities Lending Facility.
However, at one of the Bond Market Group meetings, the following opinion was provided with regard to measures to exclude on-the-run issues from those eligible for purchase in the super-long-term maturity zone: "Meanwhile, there were some temporary rises in lending fees ... in the SC repo market. However, these fees are expected to stabilize gradually as the number of investors increases, and in the long run, these measures are considered to contribute to improving the functionality of the SC repo market." See the link below regarding the minutes of the 10th round of the "Bond Market Group" meetings.
https://www.boj.or.jp/en/paym/bond/mbond1912.pdf

Chart 3-6: GC Repo Rate (O/N)



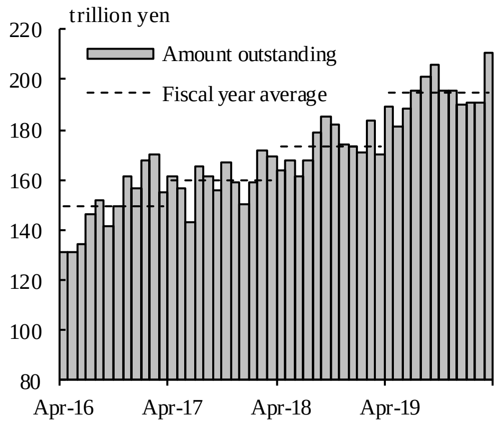
Note: Figures up to May 1, 2018 indicate T/N rates.

Chart 3-7: GC-SC Repo Rate Spreads



Notes: 1. For the GC repo rate, the Tokyo repo rate, for which transactions are carried out on the same day as SC repo (T/N; S/N up until May 1, 2018), is used.
2. The GC-SC repo rate spreads are calculated using all individual issues traded on JBOND.
3. Each percentile is calculated using 10-day backward moving averages.

Chart 3-8: Amounts Outstanding in the Repo Market



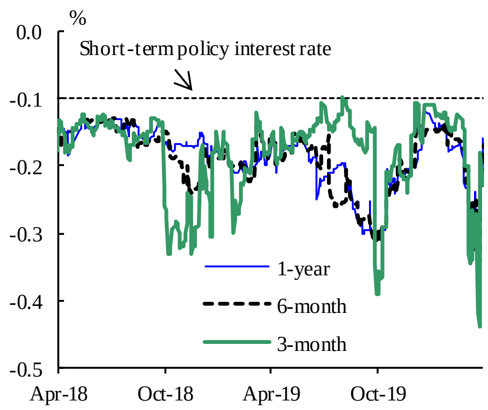
Note: Figures are the sum of securities lending with cash collateral and securities sales with repurchase agreements.

C. T-Bill Market

Yields on T-Bills (3-month) generally remained more or less in the range of minus 0.2 to minus 0.1 percent. The yields temporarily fell to around minus 0.4 percent around October 2019, when 3-month T-Bill yields had started to price in premiums over the end of the calendar year, and in March 2020, when global financial and capital markets had become unstable amid the global outbreak of COVID-19 (Chart 3-9). The temporary fall can be mainly attributed to the positive stance on purchases taken by foreign investors who took advantage of the expansion in the U.S. dollar funding premiums and the heightened demand for collateral from domestic investors.

The yields on 6-month and 1-year T-Bills moved similarly to those on 3-month T-Bills. Nonetheless, through in the middle of 2019, when expectations for the central banks' monetary easing increased, demand for T-Bills with somewhat longer terms grew in anticipation of the possible lowering of the short-term policy rate. As a result, yields on 6-month and 1-year T-Bills temporarily fell to about minus 0.3 percent, widening the yield spreads between 3-month and 6-month T-Bills, and 3-month and 1-year T-Bills.

Chart 3-9: Yields on T-Bills



D. JGB Market

Japanese long-term interest rates (10-year JGB yields) remained at around 0 percent through fiscal 2019 with the target level of long-term interest rates having been maintained at around 0 percent under QQE with Yield Curve Control. The long-term interest rates fluctuated in response to economic and price conditions, as well as trends in overseas interest rates.

In the first half of fiscal 2019, the rates followed a downward trend in tandem with a drop in overseas interest rates, mainly due to a heightening of vigilance against the U.S.-China trade friction. They then fell to minus 0.295 percent in early September, reaching the lowest level since the introduction of yield curve control. Subsequently, as overseas interest rates shifted toward a rebounding, mainly reflecting expectations for progress in U.S.-China trade negotiations, Japanese long-term interest rates also rose, temporarily reaching positive territory in late December for the first time since March (Charts 3-10 and 3-13).

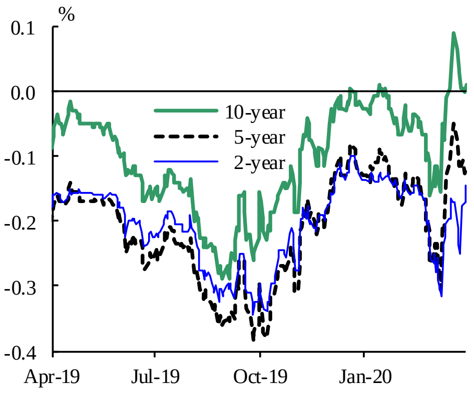
From the beginning of 2020 through early March 2020, long-term interest rates once again fell amid a global decline in interest rates, mainly caused by the high degree of vigilance against the outbreak of COVID-19. Nonetheless, from the middle of March, investors reduced their positions and increased sales with an intention of obtaining cash, while volatility increased in financial markets. Under such circumstances, a rapid increase in yields was seen amid the decrease in market liquidity, with yields temporarily reaching as high as 0.095 percent. Thereafter, as will be discussed later, upward pressures on the yields were alleviated as the Bank conducted JGB purchases that had not been scheduled in the "Outline" in advance with great frequency. They declined to 0.01 percent by the end of the fiscal year.

Looking at yields on short- and medium-term JGBs, 2-year and 5-year JGBs, for example, remained at around minus 0.40 to minus 0.10 percent, fluctuating mainly due to speculation about monetary policies and changes in demand from foreign and domestic investors. In particular, the decline in yields when investor demand rose was more notable for 5-year JGBs, with the Bank's share of holdings being relatively high compared with 2-year JGBs (Chart 3-12). Along with those on 10-year JGBs, yields on super-long-term JGBs significantly declined through September 2019. They began to rise thereafter, on the back of such factors as the rebounding in overseas interest rates and the decrease in the Bank's purchases of super-long-term JGBs. However, domestic investors' demand for positive yields was persistent, and throughout the fiscal year, yields on 30-year and 40-year JGBs declined in particular. As a result, the yield spread between 10-year JGBs and super-long-term JGBs shrank almost consistently, except for a period when they expanded temporarily in the fall of 2019, and reached their lowest level since the introduction of yield curve control (Chart 3-11).

Meanwhile, looking at the break-even inflation rate (BEI) for inflation-indexed JGBs, which is calculated as the difference between yields on them and nominal bonds over the same maturity, it remained more or less unchanged through February 2020. However, as volatility in financial markets further increased, on the back of concerns over the outbreak of COVID-19, it fell into negative territory,[12] and even declined below minus 0.30 percent temporarily (Chart 3-14). Thereafter, it has risen somewhat in negative territory, partly due to the increase in the amount of the buy-back program conducted by the Ministry of Finance. However, as demand for inflation-indexed JGBs was sluggish, the BEI remained in negative territory.

[12] The BEI fell into negative territory for the first time since fiscal 2013, when the issuance of inflation-indexed JGBs was resumed with the principal newly being guaranteed.

Chart 3-10: Yields on JGBs



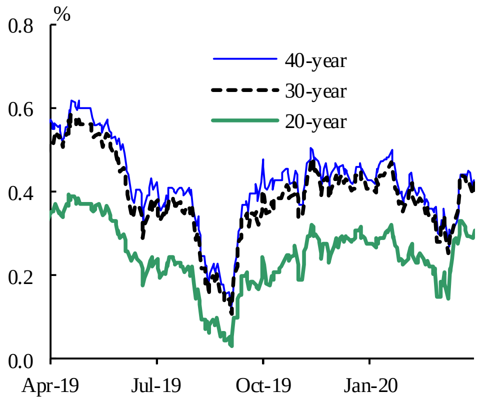
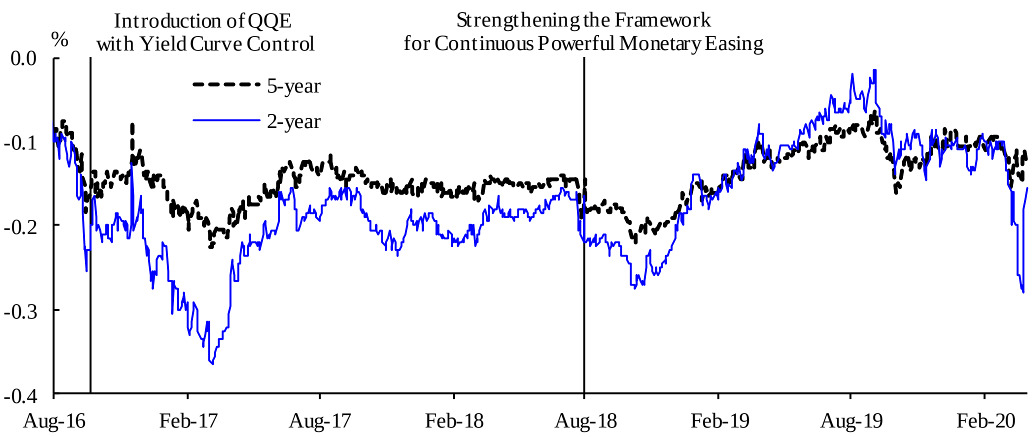


Chart 3-11: Yield Spreads between 10-Year JGBs and JGBs in Other Maturity Zones



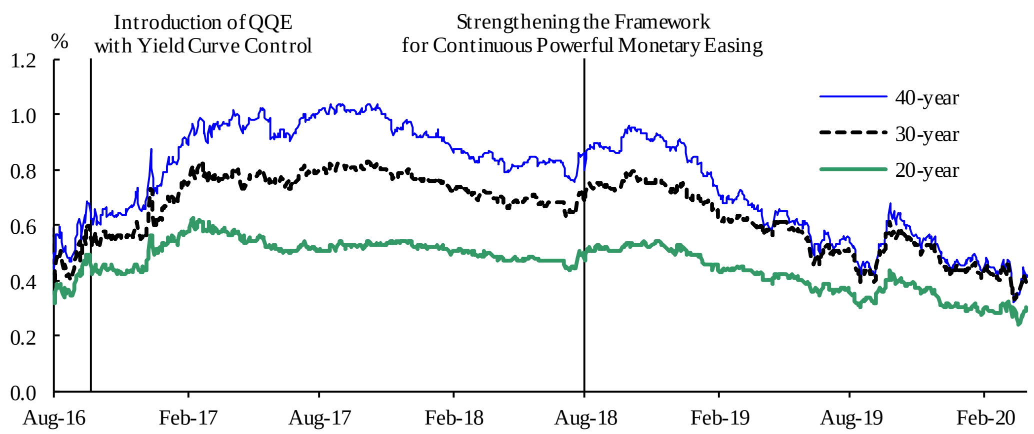
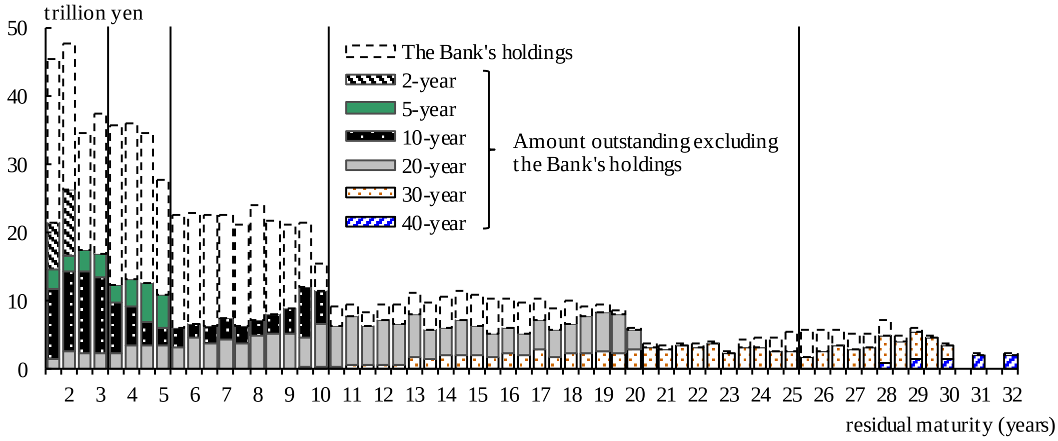
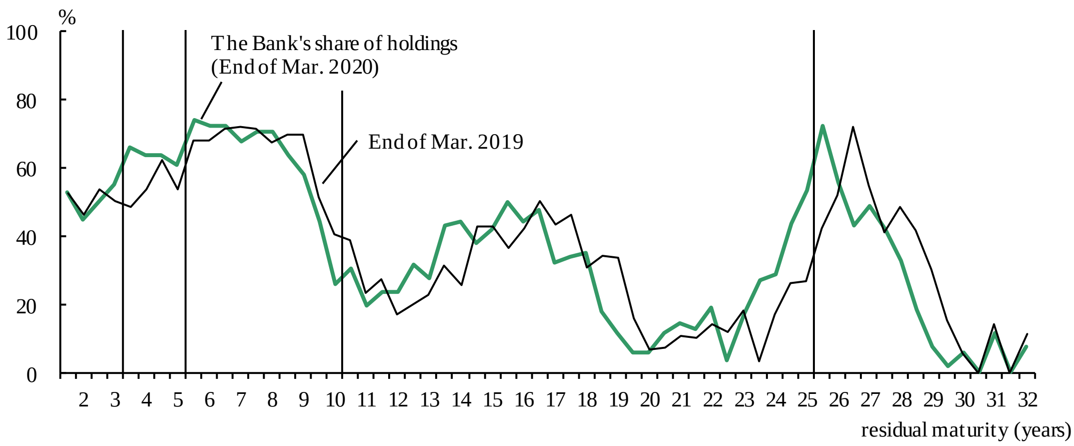


Chart 3-12: Amounts Outstanding and the Bank's Share of JGB Holdings by Residual and Original Maturity

(Amounts Outstanding)



(The Bank's Share of JGB Holdings)



Notes: 1. 2-year, 5-year, 10-year, 20-year, 30-year, and 40-year JGBs are classified by residual maturity in 6-month intervals.
2. Figures for the amounts outstanding are as of the end of March 2020.

Chart 3-13: Long-Term Yields in Japan and the U.S.

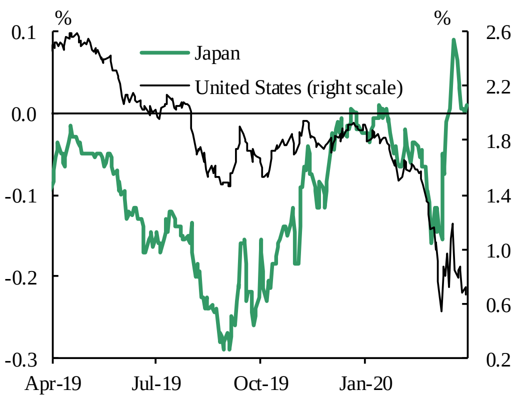
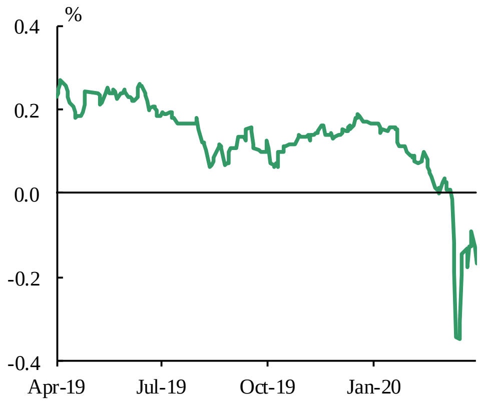


Chart 3-14: Break-Even Inflation Rate

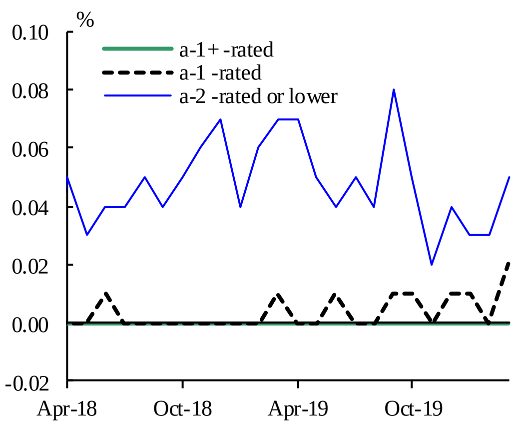


E. CP Market

During fiscal 2019, CP issuance rates, especially among issues with high ratings, remained at around 0 percent under highly accommodative financial conditions through February 2020 (Chart 3-15). Meanwhile, some CP was issued at rates in negative territory given the need among investors to invest their surplus funds. The amount outstanding of CP issuance was higher than in fiscal 2018, particularly among business companies and other financial companies (including leasing companies and nonbanks), against the background of heightened demand for cash as an environment where cash could be borrowed at rates at low levels persisted and corporate profits continued to be favorable (Chart 3-16).

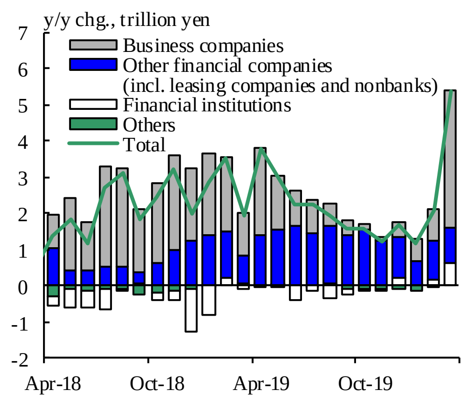
From March 2020, the impact of the outbreak of COVID-19 became increasingly widespread. There had been growing demand for funds among a wide range of firms mainly brought about by a decline in sales and the need to secure funds due to the impact of the outbreak of COVID-19. The amount outstanding of CP issuance remained on a generally increasing trend even toward the end of the fiscal year, when the amount outstanding of CP usually declines, before reaching a new record high in the latter half of March. At the same time, market participants' risk tolerance has declined in light of increasing market volatility, and there have been operational constraints such as those resulting from a shift to working from home. As a result, their investment stance on CP weakened, and the CP issuance rate gradually rose toward the end of March.

Chart 3-15: CP Issuance Rates



Notes: 1. 1-month rates.
2. CP issuance rates of business companies (including electric power and gas companies) and other financial companies (including leasing companies and nonbanks) on a monthly basis.

Chart 3-16: Amount Outstanding of CP by Issuer Type



Notes: 1. Figures are as of the month-end.
2. "Business companies" includes electric power and gas companies.

F. Corporate Bond Market

Corporate bond yields and yield spreads between corporate bonds and JGBs in the secondary market remained generally at low levels throughout fiscal 2019, and remained stable on the whole (Charts 3-17 and 3-18). While yields on JGBs, which serve as the base rate, declined in the fall of 2019, there was limited investor demand for corporate bonds with negative yields. Consequently, the decrease in corporate bond yields at issuance and in the secondary market was limited and yield spreads between corporate bonds and JGBs temporarily expanded somewhat.

Thereafter, although the yield spreads between corporate bonds and JGBs had narrowed once, the yield spreads began to widen again through the end of March 2020 as supply and demand conditions of corporate bonds worsened somewhat. During that time, liquidity in the Japanese corporate bond market declined and the need for dealers and investors to decrease their corporate bond holdings and obtain cash grew amid the increasing volatility in financial markets against the backdrop of the outbreak of COVID-19.

The amount outstanding of corporate bonds continued to increase from fiscal 2018 on the back of highly accommodative financial conditions (Chart 3-19).

Chart 3-17: Yields on Corporate Bonds and JGBs

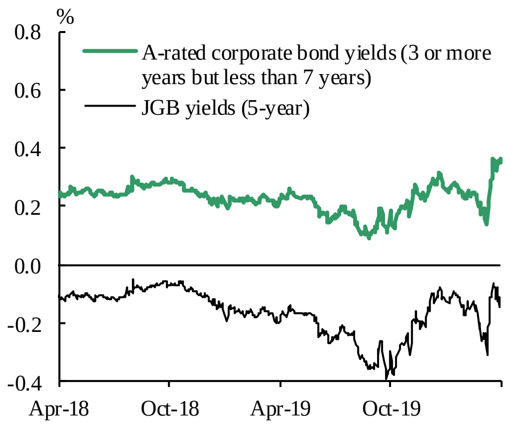
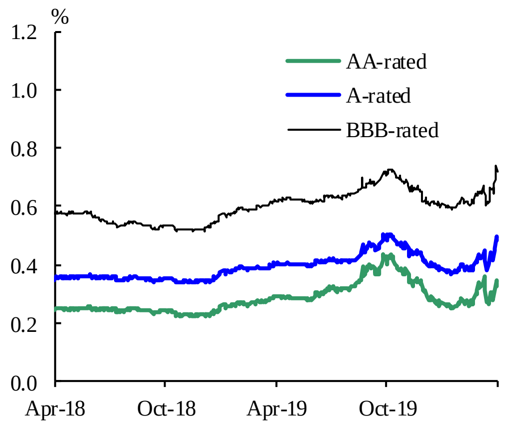
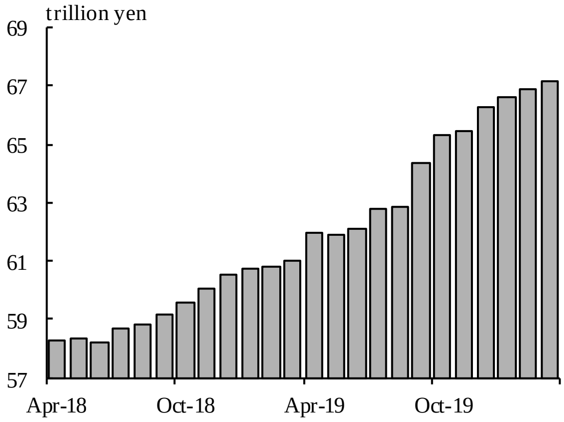


Chart 3-18: Yield Spreads between Corporate Bonds and JGBs



Note: Rated by R&I. The same applies to Chart 3-18.

Chart 3-19: Amounts Outstanding of Ordinary Corporate Bonds



Notes: 1. Figures are as of the month-end.
2. On a nominal basis. General mortgage bonds are excluded.

G. FX Swap Market

In the FX swap market, U.S. dollar funding costs (short-term FX swap-implied U.S. dollar rate from the yen) followed a moderate downward trend as the Fed shifted to policy rate cuts in August 2019, and it continued to cut the rate in a phased manner thereafter. Meanwhile, in September 2019, the U.S. money markets experienced an instability, as evidenced by a surge in the repo rate, and some financial institutions moved early to obtain funds extending beyond the end of September and the end of December. Nevertheless, the FX swap market generally remained stable through February 2020.

Thereafter, based on growing concerns due to the spread of COVID-19, in March 2020, the Fed undertook sizable policy rate cuts, by 1.5 percent in total. As a result, U.S. dollar OIS declined substantially, and U.S. dollar funding costs also temporarily declined in a significant manner. However, from the middle of March, U.S. dollar funding costs rose substantially. This rise was seen as financial institutions intensified their move to secure ample on-hand liquidity in U.S. dollars, while foreign investors unwound their trading positions of dollar-to-yen conversion through FX swaps as the concerns over COVID-19 intensified (Charts 3-20 and 3-21).

In response to these circumstances, the Fed supplied markets with ample U.S. dollar funds and, as will be described later, the central bank of each jurisdiction, including the Bank of Japan, coordinated to implement U.S. Dollar Funds-Supplying Operations in a substantially enhanced manner. Partly due to this coordinated action, U.S. dollar funding premiums began to decline again through the end of the fiscal year, and U.S. dollar funding costs also declined.

Chart 3-20: U.S. Dollar Funding Costs through Short-Term FX Swaps

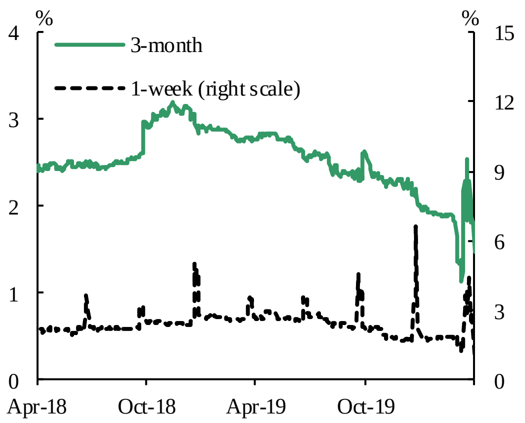
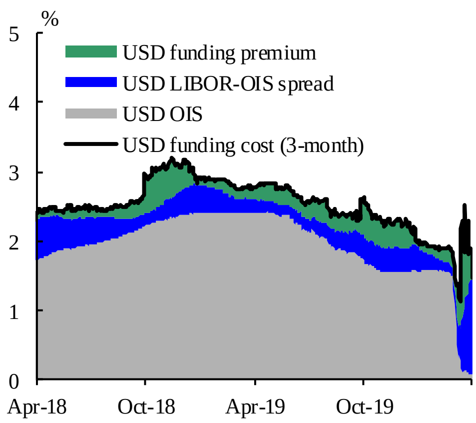


Chart 3-21: Breakdown of U.S. Dollar Funding Costs through Short-Term FX Swaps



Note: The U.S. dollar funding costs through short-term FX swaps are the total funding costs of raising yen at yen LIBOR and converting the proceeds into U.S. dollar through FX swap transactions.

IV. Conduct of Individual Measures in Market Operations

A. Three-Tier System of Current Accounts at the Bank and Short-Term Policy Interest Rate

The Bank, under QQE with Yield Curve Control, adopted a three-tier system in which the outstanding balance of each financial institution's current account at the Bank was divided into three tiers. Under this system, a positive interest rate (0.1 percent) was applied to basic balances, a zero interest rate was applied to macro add-on balances, and a negative interest rate (minus 0.1 percent) was applied to policy-rate balances (Chart 4-1).

Chart 4-1: Three-Tier System of the Current Accounts

Tier	Subject to Calculation	Interest Rate
(1) Basic balance	"Average outstanding balance of the current accounts during the reserve maintenance periods from January to December 2015 (Benchmark balance)" - "Required reserve"	+0.1%
(2) Macro add-on balance	"Required reserve" "Average outstanding balance of the Loan Support Program and other measures"[13] "Money reserve funds (MRFs)"[14] "Macro add-on amount (Benchmark balance[15]× Benchmark ratio[16])"	0.0%
(3) Policy-rate balance	Current account balance in excess of the amount outstanding of (1) and (2)	-0.1%

13 "Loan Support Program and other measures" are the Stimulating Bank Lending Facility, Growth-Supporting Funding Facility, Funds-Supplying Operation to Support Financial Institutions in Disaster Areas, the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas of the 2016 Kumamoto Earthquake, and the Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19). The amount of the increase in financial institutions' borrowing through the Loan Support Program and other measures from end-March 2016 is added to each of their macro add-on balances (twice as much as the amount of increase is included in their macro add-on balances).

14 The smaller of the average amount outstanding of MRFs entrusted to an institution during the reserve maintenance periods from January to December 2015 (on a net asset basis; including the amount that was not deposited in the current accounts at the Bank as a result of investment) and that entrusted to an institution during the designated reserve maintenance period (on a net asset basis; excluding the amount that was not deposited in the current accounts as a result of investment).

15 Includes the average amount of the current account balance and the special reserve account balance at the Bank, based on the "Special Rules regarding Calculation of Interest of Complementary Deposit Facility for New Institutions" (see Chapter V.B.2. in "Market Operations in Fiscal 2018").

16 Ratio equally applied to all financial institutions. The Bank in principle has reviewed the benchmark ratio once every three months, regularly raising the macro add-on balance to which a zero interest rate is applied, according to the amount of increase in the current account balances at the Bank on an aggregate basis, so that the "hypothetical policy-rate balance" stays within a certain range.

Some financial institutions may have "unused allowances" in their basic balances and/or macro add-on balances because the actual amount of their current account balances at the Bank falls below the upper bound on their basic balances and macro add-on balances. Other financial institutions may have policy-rate balances generated because the actual amount of their current account balances at the Bank exceeds the upper bound on their basic balances and macro add-on balances. Whether or not financial institutions have unused allowances or policy-rate balances is one of the factors that induces arbitrage trading which is carried out by borrowing (lending) cash at interest rates that are lower (higher) than those applied according to their current account balances at the Bank and depositing funds in (supplying funds from) their current accounts at the Bank. Assuming that financial institutions with "unused allowances" in their basic balances and/or macro add-on balances utilize all of their "unused allowances" to borrow cash from financial institutions with policy-rate balances through such arbitrage trading, the policy-rate balance left is referred to as the "hypothetical policy-rate balance after arbitrage transactions have taken place in full" (hereinafter referred to as the "hypothetical policy-rate balance").

During fiscal 2019, the Bank, in principle, reviewed the benchmark ratio once every three months, so that the "hypothetical policy-rate balance" stayed at about 5 trillion yen on average. This was done in line with the policy to "reduce [this balance] from the current level of about 10 trillion yen on average" "…under the condition that yield curve control can be conducted appropriately" that was set forth at the MPM held on July 30 and 31, 2018 (Chart 4-2). The Bank set different benchmark ratios for each of the March, April, and May 2020 reserve maintenance periods. This was carried out with a view to curbing excessive fluctuations in the "hypothetical policy-rate balance," taking into account monthly fluctuations in the current account balances at the Bank due to factors such as seasonal changes in banknotes and in treasury funds.

The "hypothetical policy-rate balance" is prone to fluctuate due to changes in banknotes and treasury funds that had not been factored in when the benchmark ratio was set, as well as the conduct of market operations and modification to their schemes. For example, during the March 2020 reserve maintenance period, as discussed later, Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations was utilized in large sums, and Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19) was introduced with twice as much as the amount outstanding of the loans to be included in the macro add-on balances in current accounts held by financial institutions at the Bank. Such factors pushed down the "hypothetical policy-rate balance," and consequently, it ended up at zero in the November 2019 and March 2020 reserve maintenance periods (in those reserve maintenance periods, the current account balances at the Bank were about 3-4 trillion yen below the total of the upper bounds on the basic balances and macro add-on balances).

In reality, the residual "unused allowances" remained at about 15 trillion yen, as arbitrage transactions between financial institutions with policy-rate balances and those with "unused allowances" did not take place in full. Reasons behind this were the following factors. (1) Not all financial institutions took full advantage of the arbitrage opportunity, in consideration of the transaction costs. (2) Credit line and availability in collateral constrained transactions in the uncollateralized call market and those in the repo market, respectively. In the March 2020 reserve maintenance period, however, the "unused allowances" reached 26 trillion yen, the largest amount since the adoption of the three-tier system in February 2016. Many financial institutions refrained from actively conducting arbitrage trading, as the spread of COVID-19 compelled them to alter their work environment.

The actual policy-rate balance hovered within a range of about 16-24 trillion yen, a level higher than the "hypothetical policy-rate balance," including in the November 2019 reserve maintenance period. During this period, the balance temporarily decreased to 16 trillion yen, the smallest amount since the adoption of the three-tier system, reflecting an increase in arbitrage activity, and both the call rate and repo rate reaching relatively high levels (Chart 4-3).

Developments in the three-tier system described above are presented in Chart 4-4 by sector.

Chart 4-2: Upper Bound on the Basic Balance and the Macro Add-on Balance and the Hypothetical Policy-Rate Balance

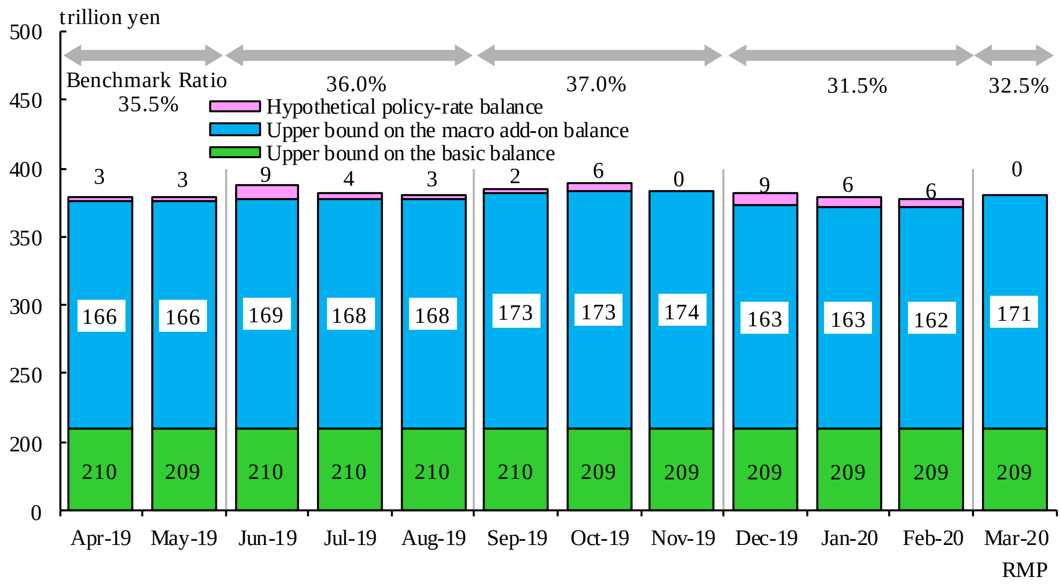


Chart 4-3: Unused Allowances in Tiers and the Policy-Rate Balance

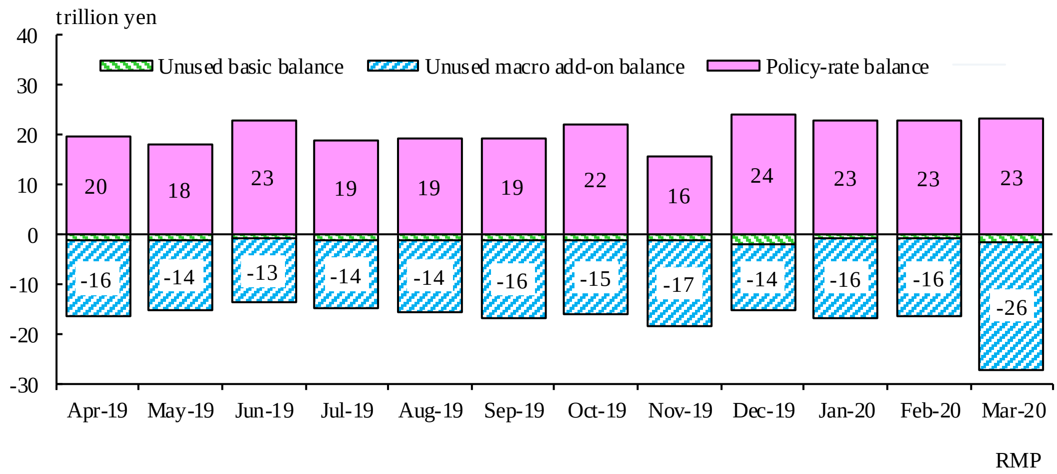
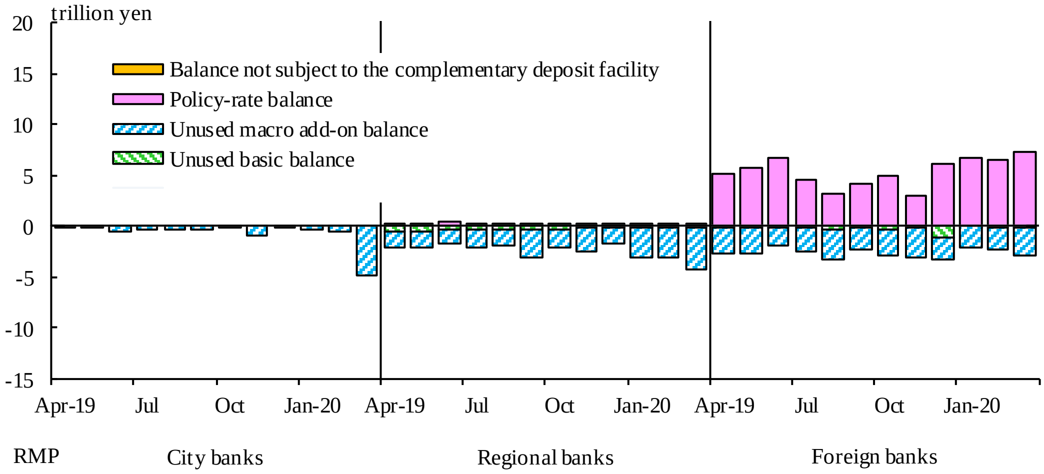
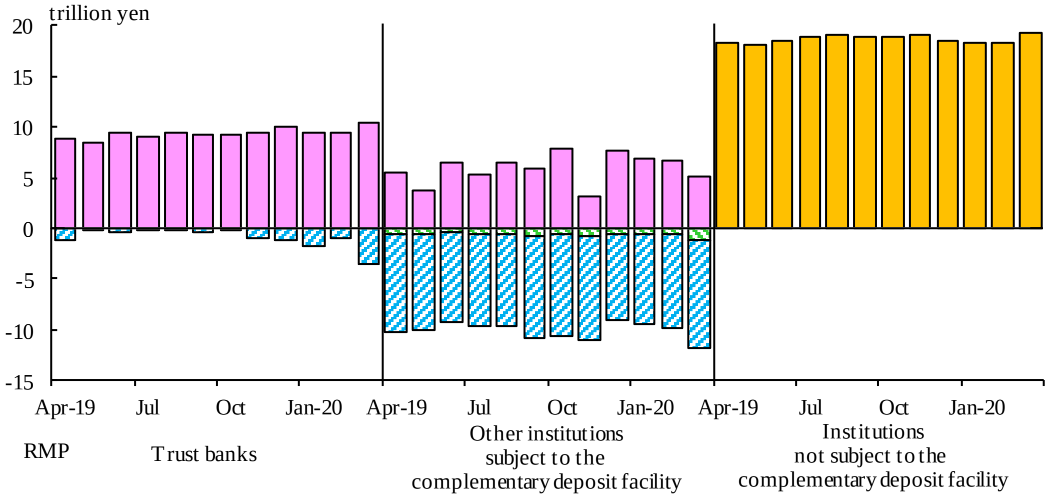


Chart 4-4: Three-Tier System of the Current Accounts by Sector





Notes: 1. "Other institutions subject to the complementary deposit facility" are other institutions subject to the reserve requirement and institutions not subject to the reserve requirement.

2. Other institutions subject to the reserve requirement include the following: Shinkin Banks (with deposits of more than 160 billion yen); Japan Net Bank; Seven Bank; Sony Bank; Rakuten Bank; SBI Sumishin Net Bank; Jibun Bank; AEON Bank; Daiwa Next Bank; ORIX Bank; Shinsei Bank; Aozora Bank; Shinhan Bank Japan; The Resolution and Collection Corporation; The Norinchukin Bank; Japan Post Bank; Lawson Bank; and GMO Aozora Net Bank.

3. Institutions not subject to the reserve requirement include the following: securities companies; *tanshi* companies (money market brokers); securities finance companies; Shinkin Central Bank; Shinkin Banks (with deposits of 160 billion yen or less); The Shoko Chukin Bank; The Shinkumi Federation Bank; and The Rokinren Bank.

4. "Institutions not subject to the complementary deposit facility" include the following: Japanese Bankers Association; Japanese Banks' Payment Clearing Network; Tokyo Financial Exchange; Japan Securities Clearing Corporation; JASDEC DVP Clearing Corporation; CLS BANK International; Development Bank of Japan; Japan Finance Corporation; Japan Bank for International Cooperation; and Deposit Insurance Corporation of Japan.

B. Outright Purchases of T-Bills

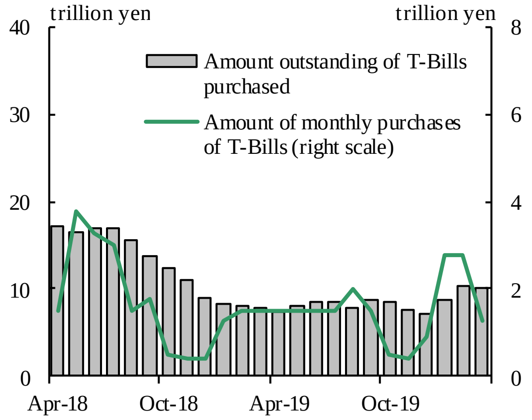
The Bank offered outright purchases of T-Bills generally once a week at 100 billion to 1 trillion yen per auction. Under the framework of yield curve control, the Bank flexibly adjusted the purchase size of each auction in response to factors such as yields on T-Bills, their supply and demand conditions and developments in other money markets.

From April to September 2019, the Bank made purchases of 250-750 billion yen per auction in accordance with the number of issuance auctions after the preceding operation, for example. From October to the middle of December 2019, the Bank generally purchased 100 billion yen per auction in light of factors such as the aforementioned rise in demand from both foreign and domestic investors. In doing so, the Bank excluded 3-month T-Bills with redemption dates extending over the end of the year from those eligible for purchase in the three rounds of purchases conducted during the period of October 1 to 16, 2019. This was based on the thinking that the Bank decides the T-Bills eligible for purchase by mainly taking account of conditions in financial markets, such as the supply and demand conditions for individual T-Bills, with a view to smoothly conducting short-term market operations. Thereafter, the Bank made purchases at 200 billion yen and 500 billion yen on December 11 and 24, respectively, as supply and demand conditions for T-Bills eased and money market interest rates rose somewhat. From January through March 2020, the Banks offered outright purchases between 250 billion yen and 1 trillion yen.

Meanwhile, the Bank flexibly adjusted the maximum bidding amount per counterparty within a range of 25-100 percent for every offer, taking into account factors such as the inventory level of T-Bills at securities companies.

Based on the aforementioned conduct of outright purchases, the amount outstanding of T-Bills purchased remained more or less unchanged through December 2019. It rose thereafter through March 2020 and reached at 10.2 trillion yen (an increase of 2.3 trillion yen year-on-year) at the end of the month (Chart 4-5).

Chart 4-5: Amounts Outstanding of T-Bills Purchased and Amounts of Monthly Purchases of T-Bills



C. Outright Purchases of JGBs

During fiscal 2019, the Bank maintained the following guideline for market operations: "The Bank will purchase JGBs so that 10-year JGB yields will remain at around zero percent. While doing so, the yields may move upward and downward to some extent mainly depending on developments in economic activity and prices. With regard to the amount of JGBs to be purchased, the Bank will conduct purchases in a flexible manner so that their amount outstanding will increase at an annual pace of about 80 trillion yen."[17] In addition, at the MPM held on March 16, 2020, mainly taking into account the impact of the outbreak of COVID-19, the Bank decided to provide more ample yen funds for the time being by making use of active purchases of JGBs and other operations with a view to doing its utmost to ensure smooth corporate financing and maintaining stability in financial markets, thereby preventing firms' and households' sentiment from deteriorating. Based on these, the Bank flexibly conducted purchases of long-term JGBs and successfully formed a yield curve in a manner consistent with the guideline for market operations.

In order to ensure the transparency of its conduct of market operations, the Bank has been releasing the "Outline of Outright Purchases of Japanese Government Securities" in advance. With regard to outright purchases of JGBs with the competitive auction method, the Bank has provided a range for the purchase size per auction for the following month and announced the dates of auctions for that month across the five maturity zones (more than 1 year and up to 3 years, more than 3 years and up to 5 years, more than 5 years and up to 10 years, more than 10 years and up to 25 years, and more than 25 years) (Chart 4-6).[18]

The Bank adjusted the purchase size per auction in a flexible manner in accordance with market conditions at the time. For the long-term zone, from August onward, as the supply and demand conditions for this zone continued to tighten and 10-year JGB yields declined further in negative territory, the Bank reduced the amount of purchases on several occasions (on August 16, August 30, September 20, and September 26). For the short- and medium-term zones, the Bank increased the amount of purchases for the more than 1 year and up to 3 year zone, whereas it reduced that for the more than 3 year and up to 5 year zone, based on the supply and demand conditions for each zone given the gradual decline in outstanding market share mainly in the 5-year zone. For

[17] The Bank announced that "in case of a rapid increase in the yields, the Bank will purchase JGBs promptly and appropriately."

[18] The Bank announces the number of offers made for JGBs with coupons with residual maturity of up to 1 year, floating-rate JGBs, and inflation-indexed JGBs.

the super-long-term maturity zone, as the supply and demand conditions have continued to tighten, the Bank reduced the frequency of purchases on two occasions, as will be discussed later. In addition, the purchase size per auction was reduced on July 3, August 9, September 2, September 20, and November 5.

Subsequent to fiscal 2018, the Bank continued to reduce the frequency of purchases and increase the flexibility in setting its purchasing schedule under the condition that the guidelines for market operations would be followed. The Bank aimed to increase the time periods in which the bond market's price discovery function could be fully realized and to contribute to an improvement in market functioning.

As for the frequency of purchases per month, for the zone of "more than 10 years and up to 25 years" and that of "more than 25 years," the Bank reduced it from four times to twice in fiscal 2019.[19]

Regarding the purchase dates, the Bank conducted purchases of JGBs across relative maturity zones on the day after JGB issuance auctions up through October 2018. However, from November of the same year, the Bank scheduled auctions in a more flexible manner, considering schedule balance throughout the month and market conditions. As part of this, from June 2019 onward, the Bank changed the purchase schedule of the maturity zone "more than 5 years and up to 10 years" so that it would not fall on the business day immediately following issuance auctions for 10-year JGBs.

Moreover, with respect to issues eligible for purchase, the Bank has excluded on-the-run 20-year and 30-year JGBs since October 2019. In addition, it decided to exclude on-the-run 40-year JGBs from January 2020 onward.

From March 2020, as global financial and capital markets became unstable due mainly to the impact of the outbreak of COVID-19, bond market liquidity plunged and upward pressure on yields was intensified. Under such circumstances, the Bank conducted unscheduled additional purchases of JGBs on March 13, 17, 19, and 23 in the sense that they had not been announced at

[19] Of these, with regard to those with a residual maturity of more than 25 years, the range of the purchase size had been set to include 0 billion yen as its lower limit since October 2019. As a result, the description concerning the frequency of purchases was revised from "the Bank may increase the frequency as needed" to "the Bank may change the frequency as needed."

the end of February in the "Outline." Specifically, on March 19, after having carried out unscheduled purchases of JGBs totaling 1 trillion yen at 10:10 AM, the Bank made an additional JGB purchase at 1:20 PM, taking account of the instability that persisted to a certain extent in bond markets into the afternoon.

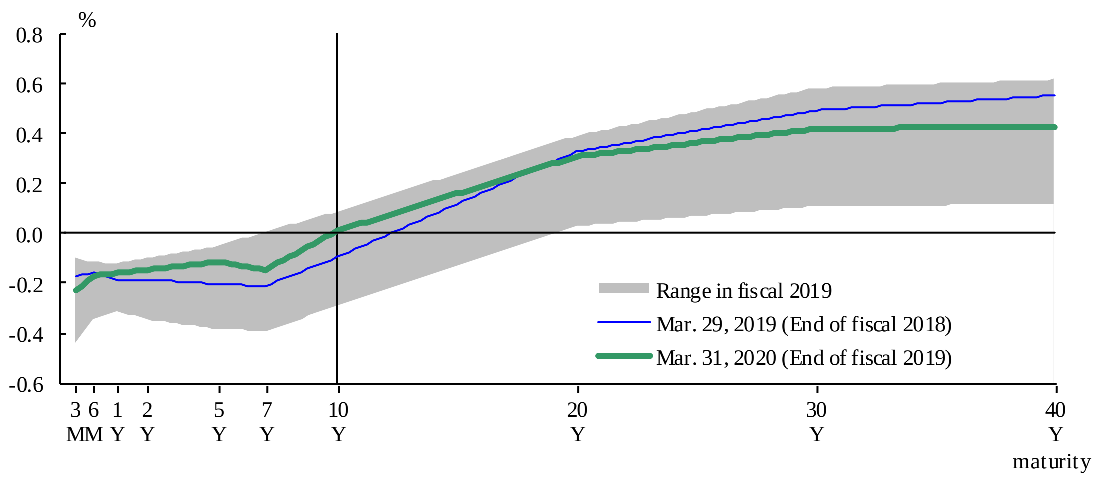
As for the purchases of inflation-indexed bonds, the Bank increased the auction amount from around 25 billion yen to around 30 billion yen per auction from November 2019. When doing so, the Bank mainly took into account the supply and demand conditions for inflation-indexed JGBs and the balance between the purchase amount of JGBs with coupons and that of inflation-indexed bonds. On March 18, 2020, the Bank conducted purchases amounting to 50 billion yen based on the further deterioration in the supply and demand conditions for inflation-indexed JGBs, as evidenced by the BEI declining deep into negative territory, for example.

Chart 4-6: Changes of Monthly "Outline"

Residual maturity	Apr-19	May-19	Jun-19	Jul~Aug-19	Sep-19	Oct-19	Nov-19	Dec-19~ Jan-20	Feb~Mar-20
-1Y	About 100-1,000	About 100-1,000	About 100-1,000	About 100-1,000	About 100-1,000	About 100-1,000	About 100-1,000	About 100-1,000	About 100-1,000
	500	500	500	500	500	500	500	500	500
	2	2	2	2	2	2	2	2	2
1-3Y	About 2,500-4,500	About 2,500-4,500	About 2,500-4,500	About 2,500-5,000	About 2,500-5,000	About 3,000-5,500	About 3,000-5,500	About 3,000-5,500	About 3,000-5,500
	3,500	3,500	3,500	3,800	4,000	4,200	4,200	4,200	4,200
	4	4	4	4	4	4	4	4	4
3-5Y	About 3,000-5,500	About 3,000-5,500	About 3,000-5,500	About 2,500-5,000	About 2,500-5,000	About 2,000-4,500	About 2,000-4,500	About 2,000-4,500	About 2,000-4,500
	4,000	4,000	4,000	3,800	3,600	3,400	3,400	3,400	3,400
	4	4	4	4	4	4	4	4	4
5-10Y	About 3,000-6,500	About 3,000-6,500	About 3,000-6,500	About 3,000-6,500	About 2,500-5,500	About 2,000-5,000	About 2,000-5,000	About 2,000-5,000	About 2,000-5,000
	4,800	4,800	4,800	4,800	4,000	3,500	3,500	3,500	3,500
	4	4	4	4	4	4	4	4	4
10-25Y	About 1,500-2,500	About 1,000-2,500	About 1,000-3,000	About 1,000-2,500	About 1,000-2,500	About 500-2,000	About 500-2,000	About 500-1,500	About 500-2,000
	1,800	1,600	2,000	1,800	1,400	1,200	1,000	1,000	1,200
	4	4	3	3	3	3	3	3	2
25Y-	About 100-1,000	About 100-1,000	About 100-1,000	About 100-1,000	About 100-1,000	About 0-500	About 0-500	About 0-500	About 0-500
	500	400	400	400	400	300	300	300	300
	4	4	3	3	3	3	3	3	2
Inflation-indexed bonds	About 250	About 250	About 250	About 250	About 250	About 250	About 300	About 300	About 300
	250	250	250	250	250	250	300	300	300
	2	2	2	2	2	2	2	2	2

Note: From top to bottom, figures are the offered amount per auction (100 million yen), the offered amount in the first round of auctions (100 million yen), and the frequency of auctions.

Chart 4-7: Changes in the JGB Yield Curve



Note: Figures for residual maturity of 7 years are yields on CTDs (JGB futures).

D. Outright Purchases of Other Assets

1. Outright Purchases of CP

The Bank purchased CP and maintained the amount outstanding of its holdings at about 2.2 trillion yen through February 2020 in accordance with the guidelines for asset purchases decided at the MPMs. Specifically, given that the residual maturity of CP purchased by the Bank grew longer as the maturity of newly issued CP lengthened, from May 2019, the Bank set its frequency of purchases and purchase dates more flexibly with a view to ensuring smooth purchases of CP. While the frequency of purchases per month decreased somewhat, the amount per auction increased somewhat.

Thereafter, "Enhancement of Monetary Easing in Light of the Impact of the Outbreak of the Novel Coronavirus (COVID-19)" was decided at the MPM on March 16, 2020, and the upper limit to purchase CP was increased by 1 trillion yen. Following this decision, the Bank also announced the "Changes in the Auction Amounts and Schedule of Outright Purchases of CP and Corporate Bonds." The auction amounts for the second and third rounds of CP purchases made in March were both raised to "around 500 billion yen," whereas both of them were initially announced as being "around 350 billion" at the end of February. The actual amounts of these auctions turned out to be 500 billion yen and 550 billion yen, respectively. Consequently, the amount outstanding of CP purchases increased to about 2.6 billion yen at the end of March, whereas it had been about 2.2 trillion yen until February 2020 with fluctuations smoothed out (Charts 4-8 and 4-9).

The lowest accepted bid yield for outright purchases of CP remained in very shallow negative territory (Chart 4-10). However, in the third round of purchases in March, it once became positive at 0.003 percent. This was the first time for the lowest accepted bid yield to be in positive territory since negative interest rates began to be applied in February 2016. Reasons behind this were an increase in the amount outstanding of CP and the rise in the issuance rates for CPs with high ratings becoming slightly positive contributed to induce this positive bid yield.

Chart 4-8: Offered Amount of Outright Purchases of CP

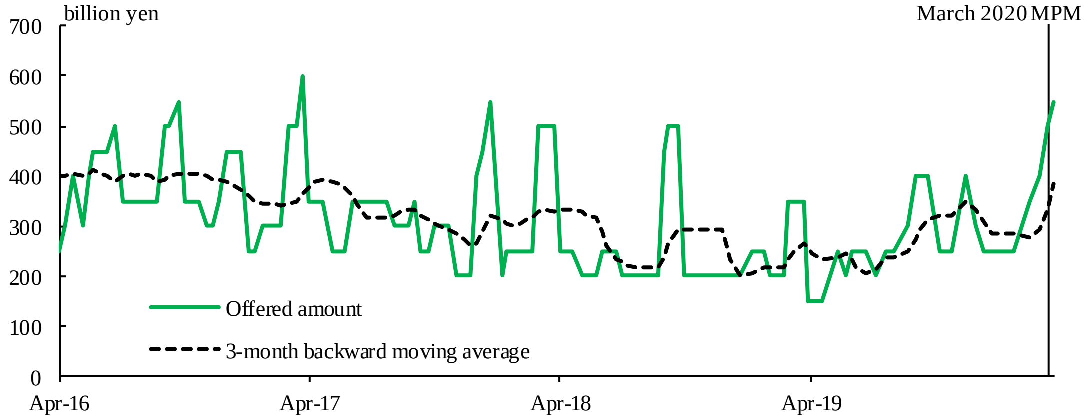


Chart 4-9: Amounts Outstanding of CP Purchased and Amounts of Monthly Purchases of CP

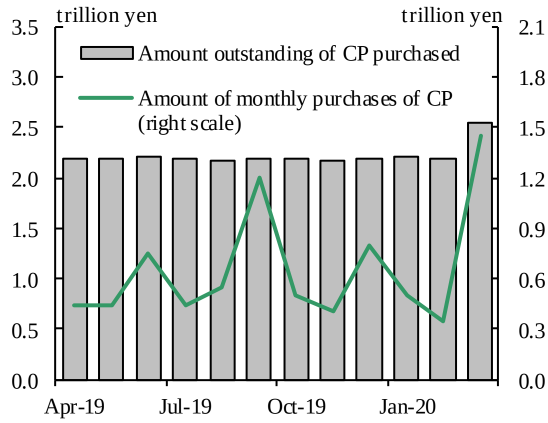
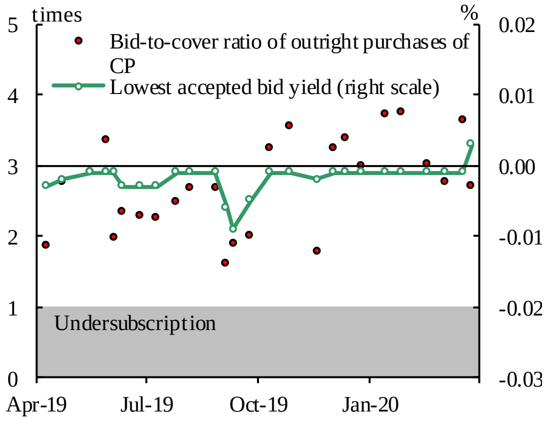


Chart 4-10: Bid-to-Cover Ratios and Lowest Accepted Bid Yield of Outright Purchases of CP



2. Outright Purchases of Corporate Bonds

The Bank purchased corporate bonds and maintained the amount outstanding of its holdings at about 3.2 trillion yen, up through February 2020, in accordance with the guidelines for asset purchases decided at the MPMs. Specifically, the Bank conducted outright purchases once a month with 75-125 billion yen per operation, considering the redemption schedules of the bonds already purchased by the Bank (Chart 4-11).

At the MPM on March 16, 2020, the "Enhancement of Monetary Easing in Light of the Impact of the Outbreak of the Novel Coronavirus (COVID-19)" was decided and the upper limit to purchase corporate bonds was increased by 1 trillion yen. Following this decision, the Bank also announced the "Changes in the Auction Amounts and Schedule of Outright Purchases of CP and Corporate Bonds." The scheduled auction amount for the corporate bond purchases to be made in March was raised to "around 200 billion yen" although it had initially been announced as being "around 125 billion yen" at the end of February. The Bank purchased exactly 200 billion yen in the auction conducted on March 23.

The lowest accepted bid yield for outright purchases of corporate bonds remained somewhat deep in negative territory in the first half of the fiscal year due in part to the decrease in need to sell the bonds through the Bank's operations. This occurred when the yields on JGBs, which serve as the base rate, were declining. In the second half of the fiscal year, the lowest accepted bid yield rose into positive territory. The demand for selling the bonds through the Bank's purchases was increasing due in part to the rise in the amount outstanding of eligible corporate bonds with a residual maturity of more than 1 year and up to 3 years, as well as the rise in its base rate (Chart 4-12). With regard to the outright purchases of corporate bonds conducted in March 2020, the lowest accepted bid yield rose to 0.082 percent, a level last seen in October 2014, reflecting investors' need to obtain cash in light of increasing market volatility.

Chart 4-11: Amounts Outstanding of Corporate Bonds Purchased and Amounts of Monthly Purchases of Corporate Bonds

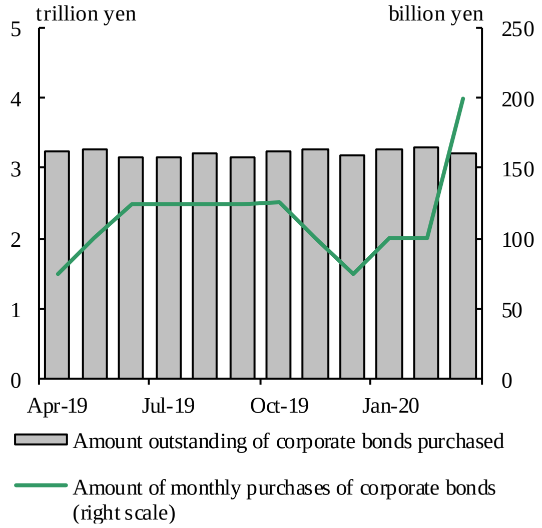
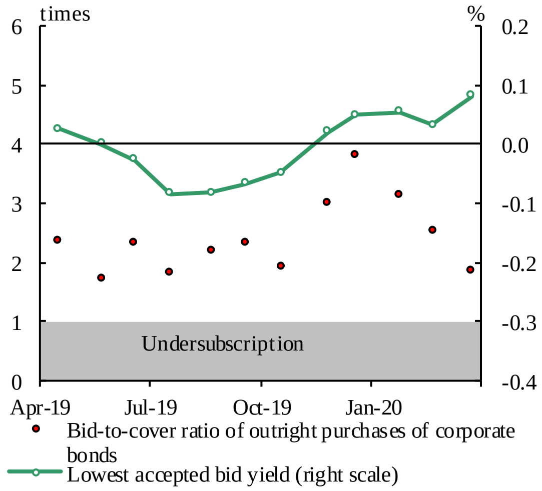


Chart 4-12: Bid-to-Cover Ratios and Lowest Accepted Bid Yield of Outright Purchases of Corporate Bonds



3. Outright Purchases of ETFs

The Bank purchased ETFs so that the amount outstanding of its holdings would increase at an annual pace of about 6 trillion yen, in accordance with the guidelines for asset purchases decided at the MPMs. At the MPM held on March 16, 2020, the Bank indicated that, for the time being, it would actively purchase ETFs so that their amount outstanding would increase at an annual pace with an upper limit of about 12 trillion yen.[20]

Based on this guideline, the Bank adjusted the purchase amount each time in a timely manner. In other words, while the Bank had set the purchase amount each time at about 70-80 billion yen since the summer of 2016, the Bank raised it to around 100 billion yen from March 2, 2020, reflecting the increase in risk aversion in the market. Moreover, based on the aforementioned decision made at the MPM held on March 16, the Bank raised it further to around 120 billion yen on March 17, then to around 200 billion yen for four purchases made from March 19 to the end of the fiscal year.

Under such circumstances, the Bank conducted 69 purchases (excluding purchases of ETFs composed of stocks issued by "firms that are proactively investing in physical and human capital" carried out every business day) during fiscal 2019. As a result, the amount outstanding of ETFs purchased by the Bank at the end of March 2020 stood at 29.7 trillion yen. Furthermore, the amount of monthly purchases of ETFs (based on trade date) stood at 163.0-1,548.4 billion yen during fiscal 2019. In particular, the purchase amount exceeded 1 trillion yen for the first time in March 2020 (1,548.4 billion yen) (Chart 4-13).

4. Outright Purchases of J-REITs

The Bank purchased J-REITs so that the amount outstanding of its holdings would increase at an annual pace of about 90 billion yen, in accordance with the guidelines for asset purchases decided at the MPMs. At the MPM held on March 16, 2020, the Bank decided to actively purchase J-REITs for the time being so that their amount outstanding would increase at an annual pace with an upper limit of about 180 billion yen.[21]

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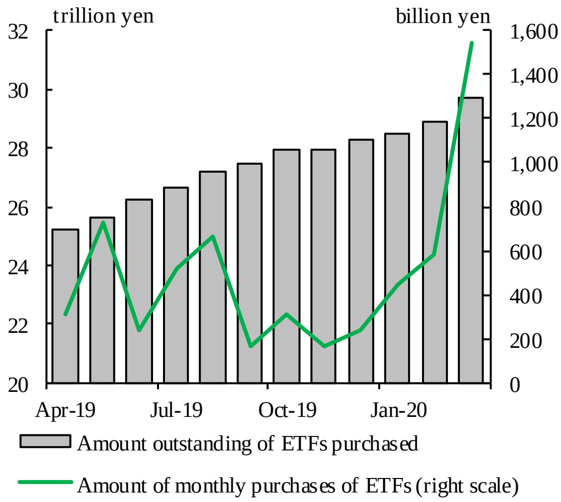
[20] The Bank stated that, in principle, it "will purchase these assets so that their amount outstanding will increase at an annual pace of about 6 trillion yen," "...with a view to lowering risk premia of asset prices in an appropriate manner, the Bank may increase or decrease the amount of purchases depending on market conditions."

[21] The Bank stated that, in principle, it "will purchase these assets so that their amount outstanding will increase at an annual pace of about 90 billion yen," "…with a view to lowering risk premia of asset prices in an appropriate manner, the Bank may increase or decrease the amount of purchases depending on market conditions."

Similar to the purchases of ETFs described in 3. "Outright Purchases of ETFs" above, the Bank adjusted the purchase amount each time in a timely manner for purchases of J-REITs. Specifically, from November 2014 onward, the Bank purchased them fairly consistently at around 1.2 billion yen each time. However, on March 16, 2020, the purchase amount was raised to around 1.5 billion yen, then to around 2.0 billion yen on March 17, and to around 4.0 billion yen for five purchases made from March 19 to the end of the fiscal year.

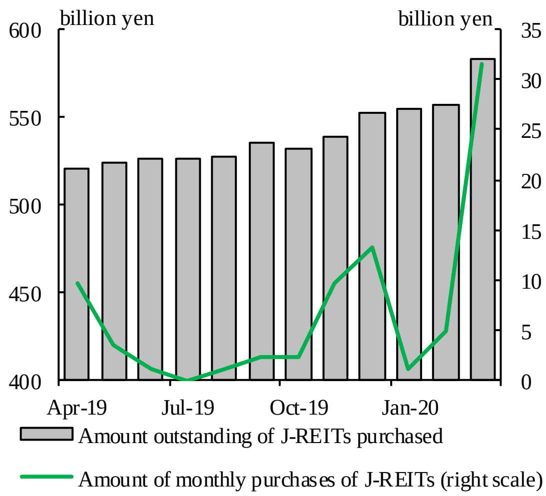
As a result, the Bank conducted 54 purchases during fiscal 2019, and the amount outstanding of J-REITs purchased by the Bank at the end of March 2020 stood at 583.4 billion yen. The amount of monthly purchases of J-REITs (based on trade date) stood at 0-31.5 billion yen during fiscal 2019 (Chart 4-14).

Chart 4-13: Amounts Outstanding of ETFs Purchased and Amounts of Monthly Purchases of ETFs



Note: "Amount of monthly purchases of ETFs" is based on trade date. The same applies to Chart 4-14.

Chart 4-14: Amounts Outstanding of J-REITs Purchased and Amounts of Monthly Purchases of J-REITs



E. Other Yen Funds-Supplying Operations

1. Funds-Supplying Operations against Pooled Collateral

The Bank continued to offer Funds-Supplying Operations against Pooled Collateral with a fixed interest rate of 0 percent with two series of operations offering loans with 2-week terms which began in May 2018. From the loans offered on November 22, 2019, the Bank has integrated the existing two series into one in principle and changed to offering loans with 2- to 3-week terms at a pace of roughly once every two weeks, while continuing to offer 1,500 billion yen per operation.

Moreover, the Bank conducted these operations in a flexible manner, such as by offering additional operations with a 1-day term or a 2-week term, at times when there was an increased demand for funds in money markets. In particular, the Bank offered an operation (3 trillion yen) with a 1-day term loans (T/N) on December 6, 2019, taking account of developments in money markets. Furthermore, from February 28, 2020, the Bank conducted operations in a timely and flexible manner in accordance with the market developments at the time, with a view to ensuring stability in financial markets, by offering additional operations while combining loans that mature within the fiscal year and beyond the fiscal year-end.

As a result, the amount outstanding of the operations stood at 1.2 trillion yen at the end of March 2020, an increase of 0.6 trillion yen from a year earlier (Charts 4-15 and 4-16).

Chart 4-15: Amounts Outstanding and Amounts of Monthly Operations of the Funds-Supplying Operations against Pooled Collateral

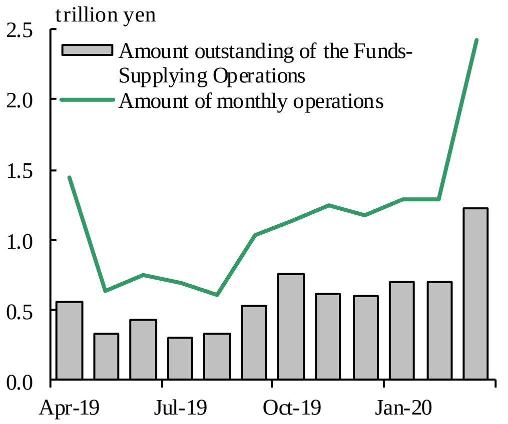
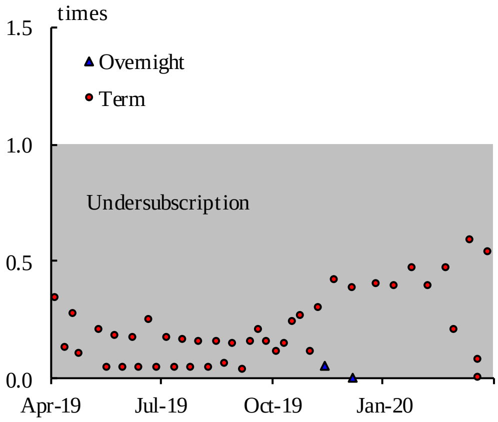


Chart 4-16: Bid-to-Cover Ratios of the Funds-Supplying Operations against Pooled Collateral



2. Purchase of Japanese Government Securities (JGSs) with Repurchase Agreements

Regarding purchases of Japanese Government Securities (JGSs) with repurchase agreements, in accordance with a statement by the governor released on March 2, 2020 that stated the Bank "will strive to provide ample liquidity and ensure stability in financial markets," the Bank offered the following operations on March 2, 3 and 13, respectively: (1) a 2 week-term operation started on March 3 and ended on March 16, (2) a 2 week-term operation started on March 4 and ended on March 16, and (3) a 2 week-term operation started on March 16 and ended on March 30. Each of these operations amounted to 500 billion yen. The term was set at 2 weeks, taking into account factors such as the need of market participants to borrow cash and the possible impact of these operations on market functioning. As these operations were offered for the first time in about four years (namely, the first time since March 18, 2016), the Bank made efforts to secure sufficient time for its counterparties to handle the submission process. For instance, in conducting the first operation on March 2, the Bank provided a longer time than usual between its offer and the cut-off time for bid submission. Moreover, given that the short-term policy interest rate had been set at minus 0.1 percent, the minimum yield was also set at minus 0.1 percent with a view to encouraging the formation of appropriate rates in money markets.

On March 2, there was bidding that exceeded the offer amount. In contrast, for the offers made on March 3 and March 16, bidding was sluggish, reflecting the growing confidence among market participants based on the Bank's stance of an active supply of funds, as well as the decline in the GC repo rate during this time (Chart 4-17).

Chart 4-17: Implementation of Purchases of JGSs with Repurchase Agreements

100 million yen, percent per annum

Offer date	Settlement date	Term	Amounts offered	Bid-to-cover ratio	Average successful bid rate	Pro-rata rate
Mar. 2	T+1	2W	5,000	1.14	-0.092	-0.100
Mar. 3	T+1	2W	5,000	0.30	-0.100	-0.100
Mar. 13	T+1	2W	5,000	0.00	-0.100	-0.100

3. Growth-Supporting Funding Facility

During fiscal 2019, the Bank disbursed loans in May and August 2019 under the main rules for the Growth-Supporting Funding Facility introduced in June 2010, a line of credit for equity investments and asset-based lending established in June 2011 (following special rules for equity investments and asset-based lending), small-lot investments and loans (for 1 million yen or more but less than 10 million yen) introduced in March 2012 (with special rules for small-lot investments and loans), and investments and loans denominated in foreign currencies introduced in April 2012 (under special rules for the U.S. dollar lending arrangement).

Given that measures to improve and to promote the use of the Growth-Supporting Funding Facility were decided at the MPM held on June 19 and 20, 2019 (see Chapter V.A.2.), the special rules for equity investments and asset-based lending and the special rules for small-lot investments and loans were integrated into the main rules. As such, in November 2019 and in February 2020, the Bank disbursed loans under the main rules and special rules for the U.S. dollar lending arrangement under the framework following the amendment (Chart 4-18).

At the end of March 2020, the outstanding balance of loans under the main rules (including the loans under the special rules for equity investments and asset-based lending and the special rules for small-lot investments and loans instituted prior to their being expiring) reached 6.3 trillion yen (a decrease of 5.7 billion yen from a year earlier). The outstanding balance of loans under the special rules for the U.S. dollar lending arrangement amounted to 24.0 billion dollars (an increase of 0.81 billion dollars from a year earlier), reaching the ceiling for total lending (Chart 4-19).

Chart 4-18: Loan Disbursement under the Growth-Supporting Funding Facility

(Main rules)
100 million yen

36th (May 30, 2019)	37th (Aug. 29)	38th (Nov. 28)	39th (Feb. 27, 2020)	Outstanding balance of loans (as of end-Mar. 2020)
4,293	1,934	10,258	2,178	63,465.48 (21,278.97)

(Special rules for equity investments and asset-based lending)
100 million yen

32nd (May 29, 2019)	33rd (Aug. 28)
5	34

(Special rules for small-lot investments and loans)
100 million yen

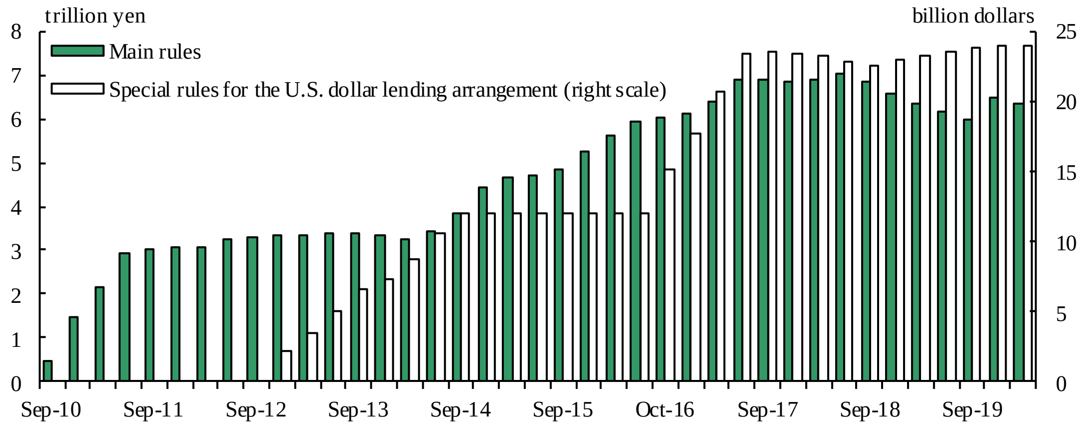
29th (May 29, 2019)	30th (Aug. 28)
19.45	6.03

(Special rules for the U.S. dollar lending arrangement)
million U.S. dollars

28th (May 29, 2019)	29th (Aug. 28)	30th (Nov. 27)	31st (Feb. 26, 2020)	Outstanding balance of loans (as of end-Mar. 2020)
712	723	342	164	24,000

Notes: 1. The date in parentheses is the offer day, and the value denotes new loans.
2. The outstanding balance of loans under main rules includes the outstanding balance of loans under the special rules for equity investments and asset-based lending (12.540 billion yen) and that of small-lot investments (9.608 billion yen), both of which were expired.
3. The value in parentheses below the outstanding balance of loans is the outstanding balance of loans to financial institutions that are members of central organizations (financial institutions that do not hold current accounts at the Bank).

Chart 4-19: Amounts Outstanding of the Growth-Supporting Funding Facility



Note: "Main rules" includes the outstanding balance of loans under the special rules for equity investments and asset-based lending and that of small-lot investments, both of which were expired.

4. Stimulating Bank Lending Facility

During fiscal 2019, the Bank disbursed loans once a quarter, four times in total, under the Stimulating Bank Lending Facility (Chart 4-20). The outstanding balance at the end of March 2020 reached 42.8 trillion yen, an increase of 3.1 trillion yen from a year earlier (Chart 4-21).

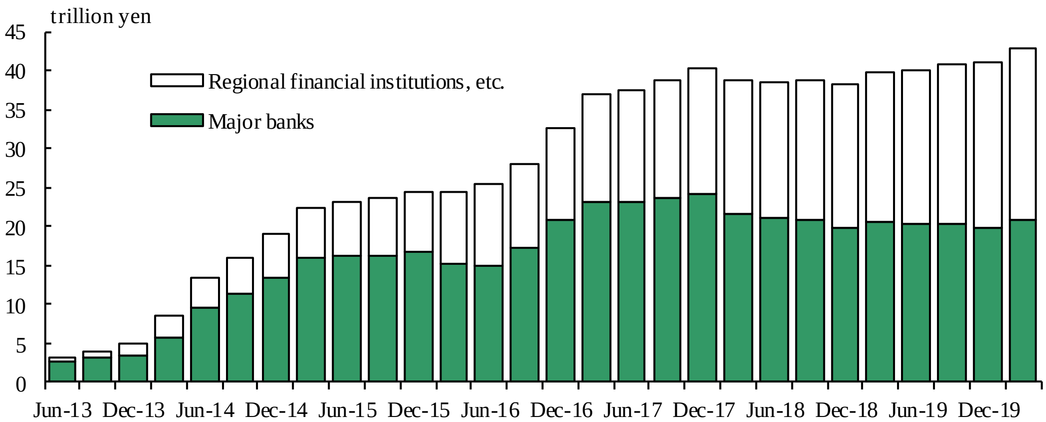
Chart 4-20: Loan Disbursement under the Stimulating Bank Lending Facility

100 million yen

Jun. 2019 (Jun. 17)	Sep. 2019 (Sep. 12)	Dec. 2019 (Dec. 12)	Mar. 2020 (Mar. 16)	Outstanding balance of loans (as of end-Mar. 2020)
28,033	13,014	20,601	41,458	428,138 (32,412)

Notes: 1. The date in parentheses is the offer day, and the value denotes new loans.
2. The value in parentheses below the outstanding balance of loans is the outstanding balance of loans to financial institutions that are members of central organizations (financial institutions that do not hold current accounts at the Bank).

Chart 4-21: Amounts Outstanding of the Stimulating Bank Lending Facility



5. Funds-Supplying Operation to Support Financial Institutions in Disaster Areas

During fiscal 2019, the Bank disbursed loans once a month, 12 times in total (Chart 4-22). All of these loans were offered with a 1-year term. The outstanding balance at the end of March 2020 stood at 406.6 billion yen out of the ceiling amount of 1 trillion yen (a decrease of 0.9 billion yen from the year-earlier level).

Chart 4-22: Loan Disbursement under the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas

100 million yen

96th (Apr. 17, 2019)	97th (May 15)	98th (Jun. 12)	99th (Jul. 17)	100th (Aug. 21)	101st (Sep. 18)
1,068	0	494	1,116	428	807

102nd (Oct. 16)	103rd (Nov. 20)	104th (Dec. 18)	105th (Jan. 15, 2020)	106th (Feb. 19)	107th (Mar. 17)	Outstanding balance of loans (as of end-Mar. 2020)
82	0	71	0	0	0	4,066

Note: The date in parentheses is the offer day, and the value denotes new loans.

6. Funds-Supplying Operation to Support Financial Institutions in Disaster Areas of the 2016 Kumamoto Earthquake

During fiscal 2019, the Bank disbursed loans once a month, 12 times in total (Chart 4-23). All of these loans were offered with a 1-year term. The outstanding balance at the end of March 2020 stood at 137.9 billion yen out of the ceiling amount of 300 billion yen (a decrease of 139.4 billion yen from the year-earlier level).

Chart 4-23: Loan Disbursement under the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas of the 2016 Kumamoto Earthquake

100 million yen

35th (Apr. 17, 2019)	36th (May 15)	37th (Jun. 12)	38th (Jul. 17)	39th (Aug. 21)	40th (Sep. 18)
200	300	369	0	500	0

41st (Oct. 16)	42nd (Nov. 20)	43rd (Dec. 18)	44th (Jan. 15, 2020)	45th (Feb. 19)	46th (Mar. 17)	Outstanding balance of loans (as of end-Mar. 2020)
8	0	0	2	0	0	1,379

Note: The date in parentheses is the offer day, and the value denotes new loans.

7. Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19)

At the MPM held on March 16, 2020, the Bank decided to introduce the Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19) (hereinafter referred to as the "Special Operations") with a view to doing its utmost to ensure smooth corporate financing and maintaining stability in financial markets, given the impact of the outbreak of COVID-19 on economic activity. Through the Special Operations, the Bank decided to provide loans up to the value of corporate debt pledged as the standing pool of eligible collateral. The operations were to offer loans with maturity up to one year, and an interest rate of 0 percent. Twice as much as the amount outstanding of the loans was to be included in the macro add-on balances in current accounts held by financial institutions at the Bank.

The first loans were offered on March 24, 2020 with a duration of three months without setting an upper limit on the amount, and the provided loans amounted to 3,396.8 billion yen.

F. Supply of U.S. Dollar Funds

1. U.S. Dollar Funds-Supplying Operations

U.S. Dollar Funds-Supplying Operations are to be used as a backstop for such cases as when market participants find difficulty in obtaining U.S. dollars despite adequate efforts to obtain them in the markets due to heightened tensions in U.S. dollar money markets, or when there is a substantial rise in the U.S. dollar funding rate.

During fiscal 2019, the Bank continued to conduct 1-week U.S. Dollar Funds-Supplying Operations on a weekly basis, in principle, prior to March 15, 2020. On the other hand, from the offers made on March 17, the Bank conducted 3-month (84-day) U.S. Dollar Funds-Supplying Operations on a weekly basis in addition to the 1-week operations. Moreover, 1-week operations were offered on all business days starting from March 23. In these operations, an unlimited amount of funds was provided at a fixed rate within the amount of eligible collateral submitted to the Bank by individual financial institutions.

With respect to the use of these operations during fiscal 2019, bidding for offers was limited to several per month in small amounts to confirm and maintain operational procedures up through the first half of March 2020, similar to the previous fiscal year. Conversely, from the enhancement of the U.S. Dollar Funds-Supplying Operations in the middle of March, there was a surge in its usage, primarily in 3-month operations, across a wide range of sectors. Japanese financial institutions seemed to have obtained sufficient liquidity in advance toward the fiscal year-end; however, given the pressure for obtaining funds continuously heightening in U.S. dollar money markets, the use of these operations increased significantly, based on the rise in demand for U.S. dollar funds. Japanese financial institutions increased their demand mainly in preparation for the drawdown of commitment lines by their clients and for securing ample on-hand liquidity in U.S. dollars in view of increased operational constraints induced by, for example, splitting operations across alternative business bases. As a result, the amount outstanding of these operations as of the end of March 2020 stood at 174.707 billion U.S. dollars. This represents a substantial increase over the peak level marked during the global financial crisis (127.574 billion U.S. dollars over December 4-17, 2008).

2. Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations

Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations is a facility through which financial institutions that use the U.S. Dollar Funds-Supplying Operations can borrow JGSs held by the Bank to be pledged as collateral to submit against their current account balances with the Bank. Its aim is to mitigate the collateral constraints of financial institutions and enhance the effectiveness of U.S. Dollar Funds-Supplying Operations used as a backstop.

During fiscal 2019, the use of the facility was limited to small amounts to confirm operational procedures up through February 2020, just the same as in previous fiscal years. However, from the middle of March, the operations were utilized extensively on the basis of the actual demand, given the large sums of bidding for the U.S. Dollar Funds-Supplying Operations that had been enhanced amid the heightening tension in U.S. dollar money markets.

Chart 4-24: Amounts Outstanding of the U.S. Dollar Funds-Supplying Operations

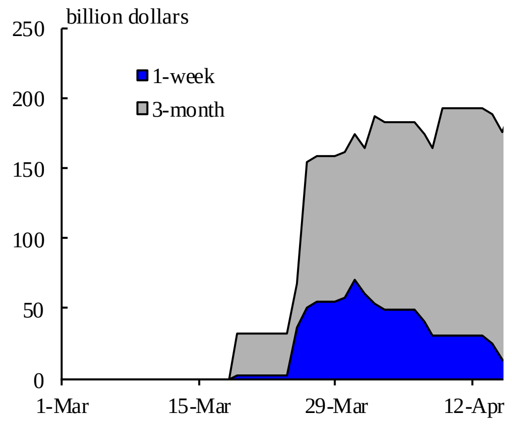
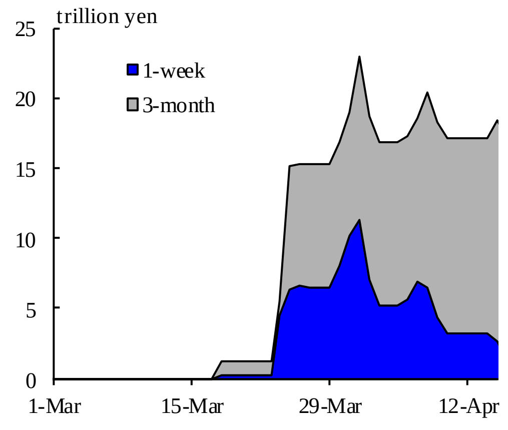


Chart 4-25: Amounts Outstanding of Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations



G. Supply of JGSs

In addition to the operations described in F.2. above, the Bank also supplied the market with the JGSs it held as indicated below.

1. Securities Lending Facility

During fiscal 2019, 306 auctions of the Securities Lending Facility (SLF) were carried out, remaining at a high level as in fiscal 2018 (when 362 auctions were carried out) (Chart 4-26). The active use of the facility partly reflected the reduction of the minimum fee rate, abolition of the upper limit on the amount of sales per issue, and digitalization of the application process that were carried out in June 2019. However, although the number of applications remained high up through February 2020, both the number of issues and their amount successfully bid remained at low levels.

From the beginning of March 2020 and until the end of the fiscal year, the need for this facility surged. This was induced by the fact that the supply and demand conditions for JGSs were tightening, due in part to the growing demand for their use as collateral. The increase in the number of settlement failures with nonresidents was also attributable to the active use of this facility. Taking into account the surge in need, the Bank took temporary measures to ensure stability of the repo market, namely, increasing the number of JGS issues offered in the SLF and raising the upper limit on the number of issues allowed for the submission of bids by a counterparty per auction (see Chapter V.C.2. for details). As a result, the number of issues and their amount successfully bid rose substantially in March (Chart 4-27).

Chart 4-26: Number of Securities Lending Facility Auctions

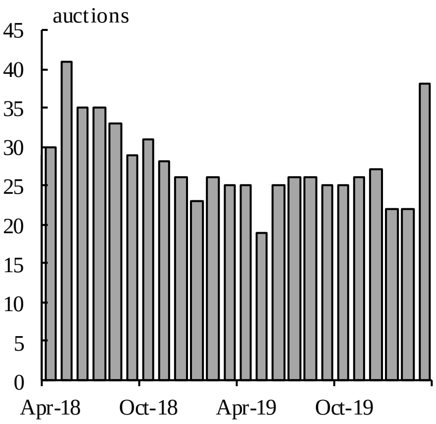
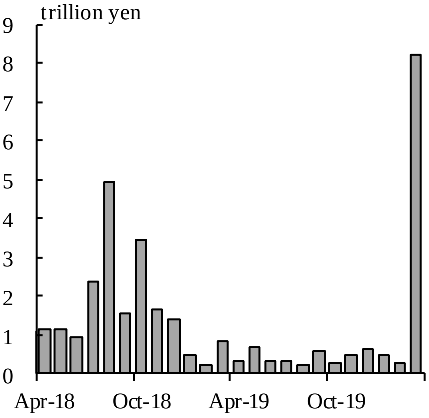


Chart 4-27: Acceptance of Bids through the Securities Lending Facility



2. Sales of JGSs with Repurchase Agreements Intended to Provide the Market with JGSs

Against the backdrop of the outbreak of COVID-19, the functioning of money markets declined. The supply and demand conditions for JGSs tightened partly due to the growing demand for JGSs to use as collateral. Under these circumstances, the Bank conducted sales of JGSs with repurchase agreements six times in total, amounting to 5.6 trillion yen, primarily as term operations (Chart 4-28). The aim of these sales was to supply the markets with JGSs with a view to easing the excessive tightening in supply and demand conditions of JGSs in the repo market, as well as to ensuring market stability.

Given that these operations were being offered for the first time in about three years since March 24, 2017, the Bank announced in advance in "Market Operations toward the End of March" released on March 13, that "On March 25, the Bank will announce offers for sales of JGSs with repurchase agreements, with the exercise date as March 31 and the repurchase date as April 1. The Bank will announce additional offers for sales of JGSs with repurchase agreements, as needed."

Chart 4-28: Implementation of Sales of JGSs with Repurchase Agreements

100 million yen, percent per annum

Offer date	Settlement date	Term	Amounts offered	Bid-to-cover ratio	Average successful bid rate	Pro-rata rate
Mar. 23	T+1	1W	8,000	3.75	-0.204	-0.170
Mar. 24	T+1	1W	8,000	4.16	-0.371	-0.270
Mar. 25	T+1	1W	4,000	6.08	-0.550	-0.550
Mar. 25	T+4	1D	20,000	1.37	-0.429	-0.150
Mar. 26	T+1	1W	8,000	3.81	-0.234	-0.210
Mar. 27	T+1	3D	8,000	3.31	-0.240	-0.210

H. Complementary Lending Facility

During fiscal 2019, the use of the facility remained at an extremely low level. This reflected the supply of ample funds to financial markets by the Bank under powerful monetary easing, which created strong perceptions of abundant liquidity in money markets.

V. Changes in the Frameworks Related to Market Operations

A. Measures Contributing to the Continuation of Powerful Monetary Easing

At the MPM held on April 24 and 25, 2019, the Bank decided to clarify forward guidance for policy rates and implement measures contributing to the continuation of powerful monetary easing, with a view to making clearer its policy stance to persistently continue with powerful monetary easing. The implementation of these measures is elaborated on below.

1. Expanding Eligible Collateral for the Bank's Provision of Credit

With respect to loans on deeds to municipal governments as eligible collateral, the Bank decided not to require any procedures such as auction as the method of determining lending conditions. Regarding privately-placed municipal bonds, the Bank decided not to impose spread requirements on the coupon rates and issue prices in terms of differences from those of publicly-offered municipal bonds. These changes became effective on June 21, 2019.

At the MPM held on June 19 and 20, 2019, the Bank decided to ease the eligibility standards concerning creditworthiness and marketability regarding debt of companies and municipal governments for the time being. This change became effective on July 24, 2019.

The Bank also decided to accept collateral such as loans on deeds to the government that financial institutions have acquired in the secondary market as eligible collateral. This change became effective on August 30, 2019.

2. Improving and Promoting the Use of the Fund-Provisioning Measure to Support Strengthening the Foundations for Economic Growth

At the MPM held on June 19 and 20, 2019, the Bank decided it would make revisions to its Fund-Provisioning Measure to Support Strengthening the Foundations for Economic Growth, which would allow financial institutions to receive the yen fund-provisioning within the limit set for each financial institution either (1) based on the amount of fund-provisioning in the past, or (2) based on the amount of eligible investment or lending in the past. These revisions became effective on October 1, 2019. In addition, regarding the Fund-Provisioning Measure to Support Strengthening the Foundations for Economic Growth and the Fund-Provisioning Measure to

Stimulate Bank Lending, the Bank decided to extend the deadline for new loan disbursements by one year to June 30, 2021.

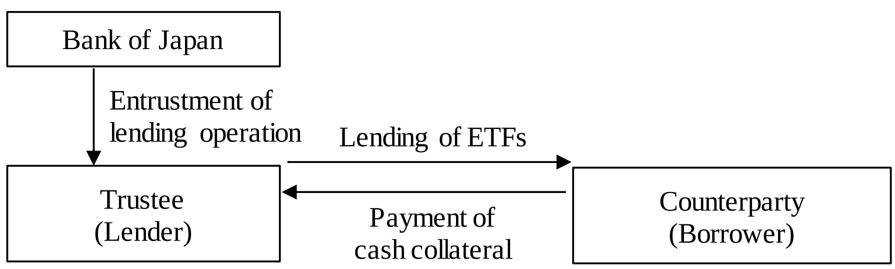
3. Relaxation of the Terms and Conditions for the Securities Lending Facility

With respect to the Securities Lending Facility, the Bank decided to reduce the minimum fee rate[22] (from 0.50 to 0.25 percent), abolish the upper limit on the amount of sales per issue (which had been set at "the amount outstanding of the Bank's holdings or one trillion JPY, whichever is smaller," but the upper limit on sales of 1 trillion yen was abolished), relax the conditions for the delivery of cheapest-to-deliver (CTD) issues (to relax the conditions on which the Bank will accept that the counterparty is unable to deliver CTD issues to the Bank regarding the first and second CTD issues for 10-year JGB futures in the nearest two contract months, of which the share of the Bank's holdings in the market exceeds 80 percent), and to digitalize the Securities Lending Facility application process. These measures became effective on June 10, 2019.

4. Introduction of the ETF Lending Facility

At the MPM held on December 18 and 19, 2019, the Bank decided to introduce an ETF lending facility, through which it temporarily could lend its ETF holdings to market participants, with a view to further facilitating the Bank's purchases of ETFs. The Bank also decided to implement this facility from April 1, 2020.

Chart 4-29: Outline of the ETF Lending Facility



[22] On this occasion, the Bank adopted the Tokyo Repo Rate as the prevailing market rate to be considered when the Bank sets the upper limit on selling yields, instead of the uncollateralized call rate.

B. Enhancement of Monetary Easing in Light of the Impact of the Outbreak of the Novel Coronavirus (COVID-19)

As global financial and capital markets had been unstable, with growing uncertainties over the global economy due mainly to the impact of the outbreak of COVID-19, the Bank decided to introduce the following measures at the MPM held on March 16, 2020. These measures were decided with a view to doing its utmost to ensure smooth corporate financing and maintaining stability in financial markets, thereby preventing firms' and households' sentiment from deteriorating.

1. Further Ample Supply of Funds

The Bank decided to provide more ample yen funds for the time being by making use of active purchases of JGBs and other operations as well as the measures described in Sections 2 and 3 below. Regarding U.S. dollar funds, it decided to do its utmost to provide U.S. dollar liquidity by enhancing the U.S. Dollar Funds-Supplying Operations.

2. Measures to Facilitate Corporate Financing

(a) The Bank decided to introduce the Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19)[23] (with twice as much as the amount outstanding of the loans to be included in the macro add-on balances in

[23] At the MPM held on April 27, 2020, the Bank decided to (1) expand the range of eligible collateral to private debt in general, including household debt, (2) increase the number of eligible counterparties (to mainly include member financial institutions of central organizations of financial cooperatives), and (3) apply a positive interest rate of 0.1 percent to the outstanding balances of current accounts held by financial institutions at the Bank that correspond to the amounts outstanding of loans provided through this operation. In addition, the name of the operation was changed to the Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (COVID-19). Moreover, at the unscheduled MPM held on May 22, 2020, the Bank decided to introduce a New Fund-Provisioning Measure in which the Bank would provide funds to eligible counterparties with the maximum amounts outstanding of eligible loans such as loans based on the government's programs reported by those counterparties with the aim of further supporting financing mainly of small and medium-sized firms. It also decided that this measure and the Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (COVID-19) would be conducted in an integrated manner.

current accounts held by financial institutions at the Bank) to provide loans against corporate debt as collateral at the interest rate of 0 percent with maturity up to one year (this operation was to be conducted until the end of September 2020).[24]

(b) The Bank decided to increase the upper limit to purchase CP and corporate bonds by 2 trillion yen in total and conduct purchases with the upper limit of their amounts outstanding of about 3.2 trillion yen and about 4.2 trillion yen, respectively[25] (with the additional purchases continuing until the end of September 2020).[26]

3. Active Purchases of ETFs and J-REITs

The Bank decided to actively purchase ETFs and J-REITs for the time being so that their amounts outstanding would increase at annual paces with upper limits of about 12 trillion yen and about 180 billion yen, respectively.[27]

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[24] The Bank decided to continue to conduct the program until the end of March 2021 at the unscheduled MPM held on May 22, 2020.

[25] The maximum amounts of additional purchases were increased to 15 trillion yen in total at the MPM held on April 27, 2020.

[26] The Bank decided to continue to conduct the additional purchases until the end of March 2021 at the unscheduled MPM held on May 22, 2020.

[27] As for the guideline for purchases of ETFs and J-REITs, in principle, it was stated that "the Bank will purchase these assets so that their amounts outstanding will increase at annual paces of about 6 trillion yen and about 90 billion yen, respectively. With a view to lowering risk premia of asset prices in an appropriate manner, the Bank may increase or decrease the amount of purchases depending on market conditions."

C. Other Changes in Frameworks

1. Amendment to the Fund-Provisioning Measure to Stimulate Bank Lending

At the MPM held on December 18 and 19, 2019, the Bank decided that, regarding the loans provided through the facility that would mature on or after April 1, 2020, it would allow counterparties to roll over either the whole or part of the amount of repayment for a long term (four years) at a low interest rate (0 percent), depending on the lending situation of each counterparty. The decision was made with a view to continuing to encourage financial institutions', firms', and households' actions, thereby stimulating bank lending. The Bank also decided to implement this amendment from April 1, 2020.

2. Operational Changes to the Securities Lending Facility

On March 13, 2020, the Bank decided that, as temporary measures, requests for issues of JGSs by counterparties in advance would be unnecessary regarding the Securities Lending Facility, and that, in principle, the Bank would offer all available JGSs held by the Bank. These temporary measures were adopted to ensure stability in the market by easing excessive tightening in supply and demand of JGSs in the repo market. Based on the same perspective, on March 24, the Bank decided to extend the implementation period of these measures. It also decided to temporarily raise the upper limit on the number of JGS issues allowed for the submission of bids by a counterparty per auction, from 20 issues to 30 issues.[28]

3. Amendment of the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas

At the MPM held on March 16, 2020, the Bank decided to reshape the operations to support financial institutions in disaster areas through integrating the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas and the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas of the 2016 Kumamoto Earthquake into the new one and abolishing the deadline of the operations, with the aim of continuing to support efforts toward

[28] On April 27, 2020, the Bank released its "Extension of the Implementation Period for the Additional Measures to Maintain Stability of the Repo Market" statement, where it announced that it would continue to implement, for the time being, the two measures regarding the Securities Lending Facility.

restoration and reconstruction made by financial institutions in a more stable manner. The decision was made that these new operations would become effective on July 1, 2020, while the current ones would be extended until June 30.

4. Enhancement of the U.S. Dollar Funds-Supplying Operations

On March 16, 2020, the Bank announced it would enhance the provision of liquidity via the standing U.S. dollar liquidity swap line arrangements in a coordinated action, together with the Bank of Canada, the Bank of England, the European Central Bank, the Fed, and the Swiss National Bank. It was announced that the six central banks would (1) lower the pricing on the standing U.S. dollar liquidity swap arrangements by 25 basis points and (2) begin offering U.S. dollars weekly in each jurisdiction with a 3-month (84-day) maturity, in addition to the 1-week maturity operations already offered. Furthermore, on March 20, the six central banks agreed to (3) increase the frequency of 1-week maturity operations from weekly to daily as another coordinated action. Based on this, the Bank substantially enhanced the auction schedule for the U.S. Dollar Funds-Supplying Operations.

VI. Actions to Enhance Dialogue with Market Participants

Under QQE with Yield Curve Control, the Bank carefully examined the developments and functioning of financial markets, as well as the impact of its operations on financial markets. The Bank also conducted daily market monitoring and various market surveys with a view to further deepening dialogue with market participants.

Furthermore, the Bank's Financial Markets Department took various initiatives in fiscal 2019 related to dialogue with market participants as follows:

1. Holding of the Meeting on Market Operations

The Meeting on Market Operations, which in principle is held twice a year with eligible counterparties for market operations, was held on October 18, 2019, and February 21, 2020. At these meetings, the Bank explained and exchanged opinions with participants on (1) recent developments in the financial markets and market operations, (2) liquidity in the JGB markets, (3) trends in the money market in Japan (including the results of the Tokyo Money Market Survey [August 2019]), and (4) exploring interest rate benchmark reforms at home and abroad.[29]

2. Holding of the Bond Market Group Meeting

The Bond Market Group Meeting, which in principle is held twice a year with bond market participants, was held on June 10 and 11, 2019, and on December 6 and 9. At these meetings, the Bank explained and exchanged views with participants on (1) the results of the Bond Market Survey, (2) liquidity in the JGB market, and (3) recent developments in the financial markets and market operations.[30]

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[29] See below for summaries of the Meeting on Market Operations held in fiscal 2019.
The October 2019 meeting (second round of 2019):
https://www.boj.or.jp/en/announcements/release_2019/rel191021a.pdf
The February 2020 meeting:
https://www.boj.or.jp/en/announcements/release_2020/rel200225a.pdf

[30] For details, see the Bank's website (https://www.boj.or.jp/en/paym/bond/index.htm/).

3. Holding of the Meeting with Relevant Parties in the ETF Market

On October 17, 2019, the Bank held the Meeting with Relevant Parties in the ETF Market to further enhance its communication with the relevant parties on the ETF lending facility. At the meeting, the Bank provided an explanation of the deliberation on the ETF lending facility, held a Q&A session and exchanged views with participants.[31]

4. Dialogue with the Study Group for Activation of Short-Term Money Markets

The Bank participated in the Study Group for Activation of Short-Term Money Markets, comprising representatives of businesses that conduct short-term money market transactions, and actively supported the deliberations and initiatives by market participants for the activation of short-term money markets. Moreover, the Bank hosted a working-level meeting, which in principle is held once a year, with the Study Group for Activation of Short-Term Money Markets on November 26, 2019. At this meeting, the Bank exchanged opinions on recent developments in short-term money markets and initiatives for interest rate benchmark reform, among other issues.

5. Initiatives by the Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks

The Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks (hereinafter referred to as the Committee), of which the Bank serves as its secretariat, engaged in a public consultation from July to September 2019, primarily focusing on alternative benchmarks for JPY LIBOR, and released its final report on November 29. In response to the public consultation, opinions were provided from a total of 40 entities across a wide array of sectors, including financial institutions, institutional investors, and non-financial corporates. The Term Reference Rates received the utmost support from these entities in the consultation.

In addition, the Committee solicited entities that would calculate and publish prototype rates for the Term Reference Rates. It reached a conclusion that Quick Corp. was suitable as a calculating

[31] For details, see the Bank's website (https://www.boj.or.jp/announcements/release_2019/rel191112a.pdf, available only in Japanese).

and publishing entity after having discussed and evaluated a number of applicants, and released a statement on its decision on February 26, 2020.[32]

[32] Quick Corp. began publishing prototype rates, which are not presumed to be used in actual transactions, on May 26, 2020. The publication of production rates, which are presumed to be used in actual transactions, is scheduled for no later than the middle of 2021.

Reference: Number of Auctions and Eligible Counterparties for Market Operations

numbers

	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019	Number of eligible counterparties
Outright purchases of JGBs	388	392	354	280	53
Outright purchases of T-Bills	48	50	50	46	50
Outright purchases of CP	36	36	36	27	34
Outright purchases of corporate bonds	12	12	12	12	34
Outright purchases of ETFs	93	81	76	69	—
Outright purchases of J-REITs	74	75	36	54	—
Funds-Supplying Operations against Pooled Collateral	64	62	53	45	268
Growth-Supporting Funding Facility	61	62	64	60	163
Stimulating Bank Lending Facility	18	16	16	16	215
Funds-Supplying Operation to Support Financial Institutions in Disaster Areas	12	12	12	12	36
Funds-Supplying Operation to Support Financial Institutions in Disaster Areas of the 2016 Kumamoto Earthquake	10	12	12	12	12
Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19)	—	—	—	1	18
Purchases of JGSs with repurchase agreements	0	0	0	3	50
Sales of JGSs with repurchase agreements	1	0	0	6	49
U.S. Dollar Funds-Supplying Operations	51	50	48	59	73
Securities Lending Facility	344	336	362	306	49
Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations	5	3	4	13	38
Total	1,217	1,199	1,135	1,021	—

Notes: 1. The number of auctions (excluding outright purchases of ETFs and J-REITs) is the number of Bank notifications of auction guidelines (offers) to eligible counterparties.
2. The number of eligible counterparties is as of end-March 2020. The number of eligible counterparties for the Funds-Supplying Operations against Pooled Collateral is that for Funds-Supplying Operations against Pooled Collateral at all offices (of which 41 counterparties are also eligible for funds-supplying operations against pooled collateral at the Head Office).
3. The number of outright purchases of ETFs excludes purchases of ETFs to support firms proactively investing in physical and human capital (offered every business day since April 4, 2016).

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